

IRRIGATION FARMING IN SUNNY ALBERTA



ANSWERS TO SOME SETTLERS' QUESTIONS

- Question**—Can I get a special railway rate to Canada?
Answer—See information under settlers' rates in this booklet. In addition you would be wise to write your District Representative, who will be able to advise you what special rates are available.
- Question**—Can I get employment on a farm in Western Canada?
Answer—Any industrious person in good health and with some farm experience need not fear lack of employment except, perhaps, during the winter months. There is a brisk demand for farm help from March 1st to November 30th, and in many cases good men are employed by the year.
- Question**—What is the rate of farm wages?
Answer—It is dependent on the season and the locality. From \$30 to \$40 a month are usual rates to pay for good farm help for the whole growing season; during harvest wages run \$2.50 per day and upwards.
- Question**—What are the chances of employment in the cities and towns?
Answer—This depends on your trade or profession, and local conditions. If you can afford a trip, make one and investigate these things for yourself. If you cannot afford the trip very well, investigation should be made by correspondence.
- Question**—Will the Canadian Pacific Railway Company accept my property here in part payment for farm land in Western Canada?
Answer—No. It is not a real estate company, and it is handling land for the purpose of colonization. It, therefore, is not interested in becoming owner of lands located elsewhere.
- Question**—When does spring farm work begin?
Answer—In March. Most of the wheat seeding is done in April; oats, barley and flax are sown in May.
- Question**—When does harvest begin?
Answer—In August. Threshing commences about the first of September and continues until late in the season. The hay crop is harvested mostly in July.
- Question**—What should a man do who is short of capital?
Answer—If you are increasing your capital where you are you should stay in your present position until you have enough to start you on a farm in Western Canada. If you are not increasing your capital where you are you might do better to seek farm employment in Western Canada. If you have some equipment you could probably rent a farm from a private owner and soon get into a position to buy one for yourself.
- Question**—Is corn used for fodder in Western Canada?
Answer—To a limited extent. The principal fodder is the natural prairie grass. Timothy, rye and oat hay are extensively used. In the irrigation districts alfalfa is the principal fodder crop.
- Question**—What is the usual snowfall?
Answer—It varies in different parts of the country. In Southern Alberta there is seldom enough snow to make sleighing possible. Most of the farmers do not have sleighs. In Northern Alberta and the more eastern provinces the snowfall is heavier.
- Question**—Should I make a personal investigation before buying land from the Canadian Pacific Railway?
Answer—Yes. You should make a personal investigation before buying land from anyone. This Company wants you to get land that will suit your purposes, and for that reason will not complete a sale to you until you have inspected the land and found it satisfactory.
- Question**—Can I deal with your representative to as good advantage as direct with you?
Answer—Yes. Our District Representatives are salaried employees. They do not get any commission on sales, but are paid a salary to give information and assistance to intending settlers.
- Question**—Where are your lands located?
Answer—We have lands throughout a very large territory and can meet the desires of almost everyone as to location. Tell us the district you prefer and we will advise you what lands are available there.
- Question**—Is not the climate of Western Canada a big disadvantage?
Answer—No. Those who live in Western Canada are the best judge of the climate and few of them would now consider removing either east or south. They consider the climate of the country one of its greatest advantages.
- Question**—Will you reserve land for me until I can sell my property here?
Answer—Take the matter up with the District Representative for your territory, who will do everything possible to accommodate you.
- Question**—I am a farmer but have no capital. Will the Canadian Pacific Railway assist me?
Answer—The Company sells its lands to good settlers on very easy terms, but it realizes that to have a fair prospect of success the farmer should have a little capital of his own in addition to any assistance given him by this Company.
- Question**—How much capital do I need?
Answer—About \$2,000 will be sufficient to give you a fair start. If you are well supplied with your own implements and live stock you may get along on somewhat less, but as a rule it is true that the more capital a settler has the greater are his advantages.
- Question**—Will the Canadian Pacific Railway rent me land?
Answer—The payments on Canadian Pacific Railway lands extended over the long terms offered make it as easy to buy the land as to rent it, and as the Company wants permanent settlers its policy is to sell the land on easy terms rather than to rent it.
- Question**—If Western Canadian lands grow good crops without irrigation, why is irrigation necessary?
Answer—The Provinces of Alberta, Saskatchewan and Manitoba comprise an area of over 750,000 square miles. This block of land is about 1,000 miles from east to west and 700 miles from north to south. In such a vast area there are differences of natural conditions, and the fact that irrigation is practiced in one district is no argument against farming without irrigation in other districts. The chief advantages of irrigation are that irrigation increases production, gives protection against dry years, and encourages closer settlement than in districts where irrigation is not practiced.
- Question**—What are the prices of horses, cattle, sheep and hogs?
Answer—All forms of live stock command high prices in Western Canada. Bring your horses, cattle and sheep with you if you can. Local markets fluctuate but current prices will be quoted upon request.
- Question**—Can I get land with running water?
Answer—Out of the great area of lands owned by this Company almost every individual preference can be met.
- Question**—I would like to come to Western Canada, but cannot get the price I want for my property here. What should I do?
Answer—Do not lose the opportunity of success in Western Canada for a small consideration as to price of your present holdings. The question is not so much whether you can get your price for your property as whether the money you can get for it would earn you greater profits in Western Canada than your present property does.
- Question**—Should I bring my farm implements to Canada?
Answer—If they are in serviceable condition and you can make up a carload, bring them. You will find it cheaper than buying new implements.
- Question**—Can a widow take up a farm from your Company on the same terms as a man?
Answer—Explain your position to the District Representative for your territory.
- Question**—If I buy land and take your offer of a loan do I receive the \$2,000 in cash?
Answer—No. The money is expended under the direction of the Company in providing house, barn, fencing and well on the land.
- Question**—Can I get a loan with any land I may buy from you?
Answer—Loans are given only with lands in the irrigation districts.
- Question**—Can a single man qualify for a loan?
Answer—Loans are restricted to married men with agricultural experience.
- Question**—I am a single man but would be accompanied to my farm by my mother or sister. Would that qualify me for a loan?
Answer—Explain your position to the District Representative for your territory.
- Question**—What does it cost to build fences in Western Canada?
Answer—The following costs are approximate. Where the settler does the work himself, of course it reduces the cost. Five-strand barbed wire, \$165 a mile; three-strand barbed wire, \$150 a mile; five-strand woven wire, \$215 a mile; ten-strand woven wire, \$330 a mile.
- Question**—If I take up land from you and change my mind can I cancel my agreement?
Answer—The settler would doubtless expect the Company to carry out its part of the agreement and he is under the same obligation. In case of settlers who meet with misfortune, however, the Company asks only to be judged by its record.
- Question**—When is the best time to visit Western Canada?
Answer—Almost any time that suits your convenience. Get into touch with the District Representative for your territory and find out when his next party will be going to Western Canada.
- Question**—Is live stock raising more profitable than grain farming?
Answer—The two should be combined. In seasons of high grain prices and other favorable conditions grain farming is very profitable, but the farmer who has a few horses, beef steers, hogs, sheep, cows and poultry for sale every year, is in the best position.
- Question**—Should I try to make up a party of neighbors to settle in one district?
Answer—That is a good plan. Such neighbors can co-operate in the use of machinery and in farm operations in such a way as to considerably reduce their expenses.
- Question**—If I buy irrigated land how much does the water cost?
Answer—From 50 cents to \$1.25 per acre per season, according to location.
- Question**—How much water is supplied for this price?
Answer—A flow amounting to practically two feet per acre for the season.
- Question**—Will not the war result in heavy taxation on the farmers' lands?
Answer—The taxes on farmers' lands in Western Canada are much lighter than the usual farm tax in the United States, and, in addition, in Western Canada no taxes are charged on improvements, farm implements, live stock or personal effects. The Government has shown no disposition to increase taxation on farm lands to meet any part of the war expenditure. Taxes could, however, be very greatly increased and still be lower than they are in the United States.

Write for fuller information on any point to
DEPARTMENT OF COLONIZATION AND DEVELOPMENT
 Canadian Pacific Railway
 Calgary, Canada,
 or
 List of District Representatives, including Canada, shown on
 last page of cover.

IRRIGATION FARMING

— iii —

SUNNY ALBERTA

WHY AN IRRIGATED FARM ?

The first question asked by the farmer who has not had previous experience in irrigation is, "Why should I buy an irrigated farm, when I can get land in Western Canada that will grow good crops without irrigation ?"

The question demands an answer. Irrigated lands cost more than non-irrigated lands in the same districts (although irrigated lands in Southern Alberta are sold for less money than lands without irrigation in older settled districts). Unless we can satisfy you that irrigated land yields a bigger return on the investment than non-irrigated land, you will not want to engage in irrigation.

It is the purpose of this booklet to answer the above question, and all who are sincerely interested in an opportunity to farm under the most favorable conditions will find every word herein worth reading. The reasons you should buy an irrigated farm in preference to any other kind of farm cannot be told in a sentence or a page, but here are some points which help to answer the question:

1. The irrigation farmer is not at the mercy of the weather. You wouldn't live in a house without some kind of heating plant, trusting to the moderation of the weather, would you ? Then why should you live on a farm with no watering plant, risking your crops and your prosperity upon the uncertainty of rainfall ? By means of his irrigation system the irrigation farmer controls the moisture on his farm just as accurately as you, by means of stoves or furnace, control the temperature in your house.

2. The irrigation farmer gets bigger crops. Now and again the farmer on non-irrigated land gets a bumper crop. What causes a bumper crop in Western Canada ? Simply this, the right amount of moisture at the right time. Given these conditions, a bumper crop on the fertile land of Western Canada is assured. But the most perfect climate is subject to variations; these conditions do not come every year. **To the irrigation farmer they do come every year.** His personal experience, the advice which the Company's experts stand ready to give him, and the experiments of the Dominion Government are at his command to show just when he should use moisture, and how much. He may make mistakes at first, just as the man with a new furnace will not get the best results until he learns how to use it. But the man with the new furnace does not sit and freeze because he does not understand it at first; he studies his plant and soon masters it. So the irrigation farmer studies his soil, his crops, the climatic conditions of his district, and learns to treat his land in such a way that when he plants a crop **he knows** he is going to reap a harvest. So while the farmer on non-irrigated land gets a bumper crop now and again, the irrigation farmer gets one every season.

3. The irrigation farmer can grow a greater variety of crops. Not only does he grow more to the acre, but he grows more kinds, thus permitting him to employ more scientific crop rotation, and supply more of his needs. In the Canadian Pacific Railway Company's Irrigation Districts, for instance, he can grow alfalfa, "the king of fodders," with great success. Alfalfa on irrigated land is the foundation of the livestock and dairy industry. He can grow vegetables with greater success, by applying just the right amount of water at the right time; the same is true of small fruits, and, as the country develops, will doubtless prove true of larger fruits, which are already grown in the older irrigated districts of Alberta.

4. The irrigation farmer has a better climate. As there is less wet weather, he has more bright sunshine than in districts which depend on rainfall for moisture. His plans are not so often interrupted by unfavorable weather. If there is anything more exasperating to a dry farmer than drouth in the growing season, it is rain in harvest. The irrigation farmer never suffers from the first and rarely from the second. He does not have the same loss of time of himself, his men, and his equipment on account of rain. His livestock thrive better. He has better roads, and in Alberta he has the finest climate of any agricultural section of the American continent.

5. The irrigation farmer has greater community advantages. The very nature of irrigation tends

to close settlement. The farms are comparatively small, because they produce more to the acre, and fewer acres are necessary to support the farmer. The settlement is confined to certain definite areas, instead of scattered over a whole country. Consequently there are neighbors close at hand; schools, churches, telephones, mail deliveries, and all community organizations flourish as is not possible under other conditions.

6. The irrigation farmer does not need to summer-fallow his land. In districts where dry farming is practised, half the land is summer-fallowed each year to conserve the moisture for the following year's crop. In districts where this is not necessary, much summer-fallowing must still be done to keep the land free from weeds. But in irrigation districts it is not necessary to leave land fallow in order to conserve moisture. As to weeds—every farmer knows it is in dry seasons the weeds make their great inroads. Water overcomes them largely, and whatever water fails to do is accomplished by rotation of crops and good cultivation. It is true the irrigation farmer puts more work on an acre than does the dry farmer (except in growing alfalfa) but he makes every acre bear crop every year, instead of leaving half his farm fallow.

7. The irrigation farmer's land never wears out. As soon as it shows any disposition to lose its fertility, he plants it to alfalfa, which restores the nitrogen to the soil, and makes it richer than it was in the days before it ever knew a plow. The alfalfa he feeds to his livestock, and the manure, in turn, goes back to the soil, thus replenishing it doubly. After a number of alfalfa crops the land is planted to some such crop as sugar beets; then two or three crops of grain are taken; then back to alfalfa. A farm may be cultivated in this way forever without losing its virgin fertility.

8. The irrigation farmer makes a home. His system of agriculture, rotating crops over a period of years, means that he is going to give his life to his profession. He is not in the business to mine his soil for a few years, get two or three snap bumper crops, and move on, leaving his farm weed-ridden and exhausted. On the contrary, every year his land becomes more valuable, not for speculation, but for actual production. Consequently there is no purpose in leaving it. If, when he buys a farm, he plants on it some of the trees which the Canadian Pacific Railway Company furnishes free for the purpose, he will in a few years have fine groves and shelter belts, which relieve the bareness of the prairie and give his farm a homelike appearance. The shelter belts allow him to grow small fruits in a profusion that would not otherwise be possible. With his dairy cows, his hogs, sheep, and poultry, his vegetables and fruit, he becomes as nearly independent as it is possible for anyone to be under the conditions of modern civilization. What other business or industry offers a future so desirable?

WHAT THE CANADIAN PACIFIC RAILWAY HAS TO OFFER

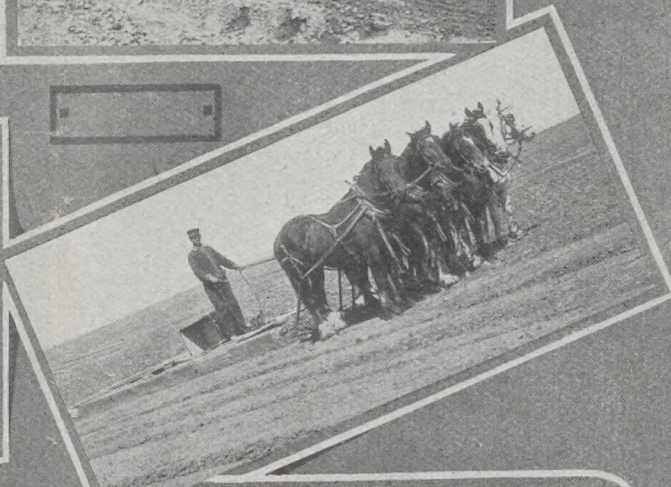
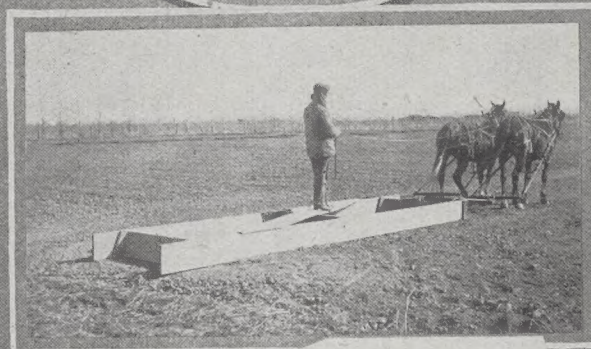
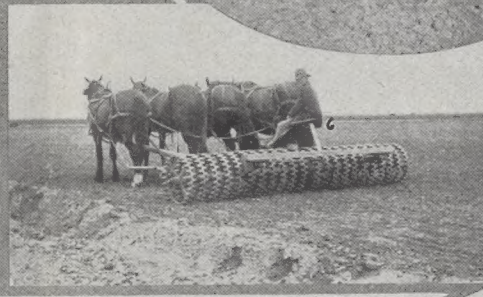
If you have carefully read the foregoing you may not yet be convinced that you should buy an irrigated farm, but it must be clear to you that, in your own interest, you should at least look into the advantages of irrigation before taking such an important step as selecting a farm. You therefore cannot do better than make an investigation of what the Canadian Pacific Railway Company has to offer. The Canadian Pacific Railway Company has lands where irrigation is not used, as well as where it is; it is interested in both kinds of farming, and it cannot afford to recommend one kind in preference to another, except where experience has shown such recommendation to be in the best interests of the settler. When you seek advice from the Canadian Pacific Railway Company on this subject you are not dealing with a prejudiced concern, which sees all the good in one system and all the bad in another; you are dealing with a great transportation company whose permanent success depends on the success of the farmer. It is not a company trying to make a lot of money out of its land, but a company trying to settle the fertile prairies of Western Canada with successful farmers, whose prosperity will furnish railway business for all the future.

The Canadian Pacific Railway Company has developed in Southern Alberta the largest individual irrigation project on the American continent. It has an area greater than the total irrigated area in either Colorado or California. Surveys originally made by the Dominion Government deter-

mined that for about 150 miles south-easterly from Calgary, along the main line of the Canadian Pacific Railway, and lying between the Bow River on the south and the Red Deer River on the north, was a district admirably suited to irrigation. The soil was deep and fertile, easily cultivated, and, generally speaking, without obstructions of any kind; the land lay in gentle slopes to the north-east, affording the natural flow necessary for irrigation, and to provide easy disposal of surplus water; and sufficient water was available in the Bow River to insure that irrigation could be carried on for all time. The Bow River rises in the Rocky Mountains, where it is fed by the eternal glaciers. It is not dependent upon rainfall; the hotter the season the greater is usually the flow of water. There are no spring freshets, but high water is experienced during the hot months of June, July and August.

The feasibility of irrigating this immense area lying along the main line of the Canadian Pacific Railway was naturally of great interest to the Company, and after weighing all local conditions—soil, climate, water supply, engineering features, altitude, etc.—and obtaining the most expert advice, the Company finally undertook the development of this area as an irrigation project. Its aim was not to make a big direct profit out of the project, but to create an immensely rich and productive farming community which would furnish traffic for the Company's railways.

The Block contains irrigable and non-irrigable areas, and offers to the purchaser an opportunity to engage in mixed farming under almost ideal conditions. Here can be secured, side by side in the same quarter section, land



PREPARING LAND

It will be noted that the implements used are for the most part inexpensive, some of them being of such a nature that a handy farmer can make them himself.

lying above the canal system for the grazing of livestock, and irrigable land for crops such as alfalfa, barley, vegetables, etc., requiring abundant moisture. All crops give greater returns under irrigation, but the increase is most marked in the case of alfalfa, all forage crops, vegetables and small fruits. For farm uses there is a never-failing supply of water, which ensures crops when the seed is placed in the ground, while the problem of a constant supply in every pasture for the use of stock is also solved. Combination farms in the Block may be regarded as one of the best agricultural propositions on the continent.

For convenience in development, the Block is divided into three sections, designated respectively: Western, Central and Eastern. Water for the Western Section is diverted from the Bow River at Calgary. Water for the Eastern Section is also obtained from the Bow River, by means of a great dam located a few miles from the town of Bassano. The Central Section has not yet been developed as an irrigation project.

LETHBRIDGE DISTRICT

A separate irrigation district is the Lethbridge Irrigation District, which lies somewhat to the south of the main Canadian Pacific Railway Irrigation Block. It was originally developed by the Alberta Railway and Irrigation Company. It is the oldest large irrigation project in Alberta, and has now reached a stage of remarkable development and prosperity. In the spring of 1912 it was acquired by the Canadian Pacific Railway, by whom it is now administered. The water is drawn from the St. Mary River, which is fed by the glaciers and snows of the Rocky Mountains. The Lethbridge Irrigation District is the greatest alfalfa producing section of Western Canada.

THE WATER SUPPLY

Those who have had experience in other irrigation countries know that the really vital thing is the water supply. For an irrigation project water is just as necessary as land. The supply must be sufficient, and it must be administered under laws which protect the settler. In these respects the Canadian system is perhaps as nearly ideal as it can be made. The water, in the first place, belongs to the Government of Canada. It is not owned by the provinces, so there can be no confliction of laws, and no confliction of authority.

In Canada, when it is proposed to establish an irrigation district, the Canadian Government must receive notice of the proposed scheme, showing the area affected, the source from which the water is to be taken, etc. The plan is then investigated by irrigation experts employed by the Canadian Government. Records extending over a long period of years show the amount of water which flows in all principal streams at low water, and from these records the Government engineers determine whether there is sure to be always sufficient water to supply the needs of the proposed district. If, after full investigation has been made, it is found that there is plenty of water, and that other conditions are favorable to irrigation, the Government grants a license for the use of the water required. The Government always leaves itself a safe margin; it does not allow all the water in a stream to be appropriated, but holds back a safe reserve so that under no circumstances can there be a shortage of water.

This, in a few words, is an outline of the Canadian system—the system under which the Canadian Pacific Railway Company is authorized to use water for irrigation purposes. The water, as has already been stated, is taken from the Bow River and the St. Mary River, both mountain-fed rivers which are not dependent upon rainfall for their

flow. They come out of a wild mountain region—a region of national parks and forest reserves which protect them from the conditions which in other countries have sometimes seriously affected the amount of water flowing through the rivers.

The farmer pays a maintenance fee, but does not pay a water-right tax. The water is free from the Government, and no charge is actually made for the water; the charge is for the maintenance of the system. Under your contract with the Canadian Pacific Railway this charge does not exceed \$1.25 per acre, per year; in some districts it is as low as fifty cents per acre per year.

SOIL

The soil of the area embraced in the Canadian Pacific Railway Company's irrigation projects is all of an unusual depth and varies from sandy to clay loam in nature. The predominating soil being of medium texture, either clay loam or sandy loam in nature, and always of good depth with ample water holding capacity, the irrigator is troubled neither with the necessity for frequent irrigation found on the shallow soils of some districts nor with the baking and crusting of the surface common to the heavy soils of others.

The topography of the district may be said to be gently rolling with an average general slope of approximately ten feet per mile and lends itself readily to irrigation.

The soils of the district are not only well adapted to irrigation because of their topography, texture, depth, water-holding capacity and freedom from rocks and hard pan, but are unusually fertile as well.

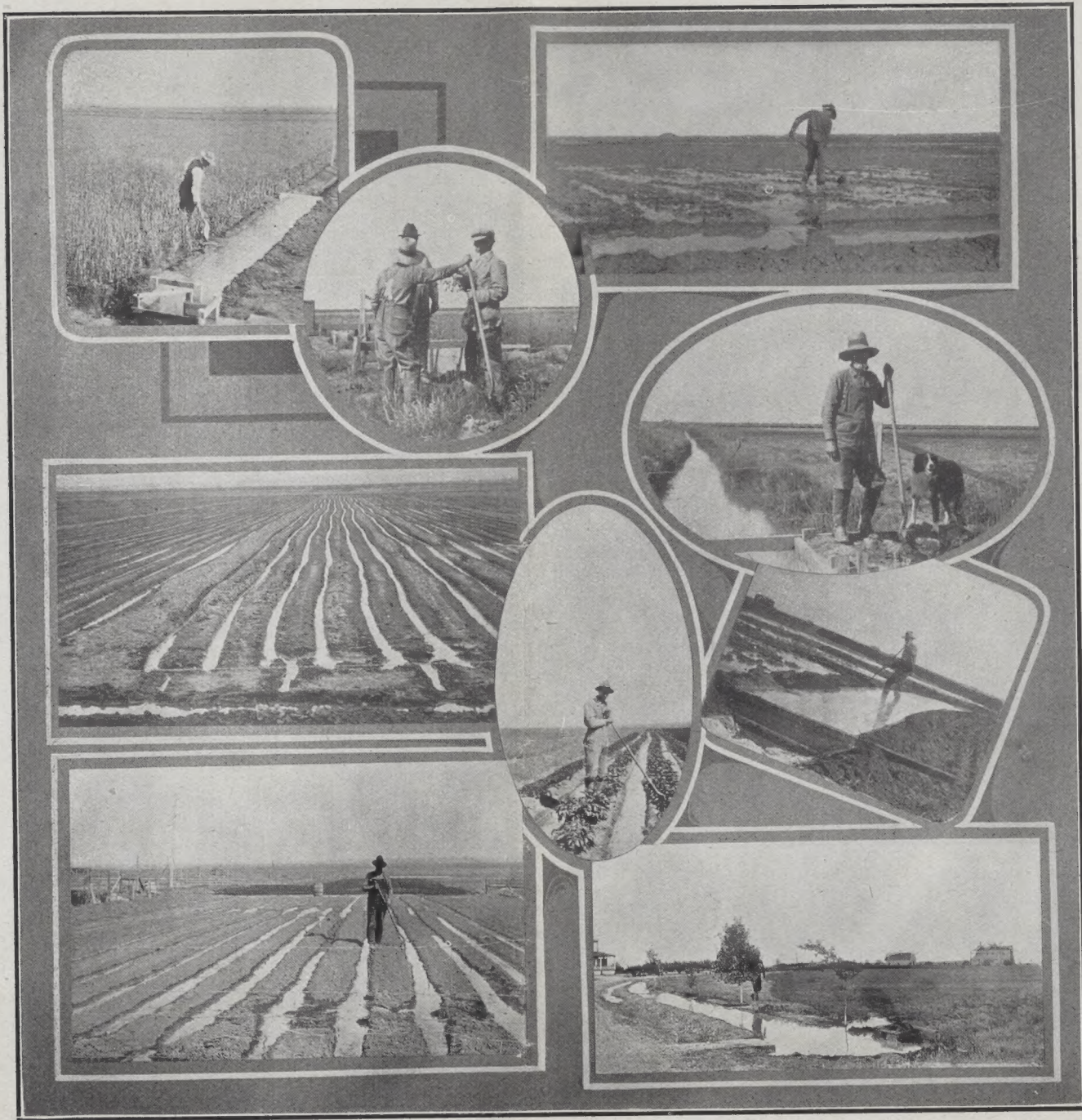
In order to be highly productive, soils require large, readily available quantities of both the vegetable plant food (humus or nitrogen) and of the mineral plant foods (potash, phosphoric acid and lime) and there are but few soils that contain them all in sufficient quantities for maximum crop production. Soils formed under humid conditions have large quantities of vegetable plant foods (nitrogen) formed by the decay of plants grown by the rains of centuries, but are deficient in the mineral plant foods as these have been largely leached out by the rains. The soils of an arid district are just the opposite, and are rich in the mineral plant foods and deficient in nitrogen, there having been insufficient rains to either leach out the plant foods or to produce vegetation from which the nitrates are formed.

The climate of South Central Alberta being neither humid nor arid but semi-arid in nature, there has been sufficient rain to grow a dense mat of buffalo grass on our prairies for centuries, but insufficient precipitation to leach or wash the plant foods from our soil as has been done in all humid sections. These soils therefore contain both the high nitrogen content of the humid soils and the high mineral plant food content of the arid soils, which makes an ideal combination and a most fertile soil that will withstand long years of cropping.

CLIMATE

Along with water and soil, the vital thing in farming is climate. And in this respect Southern Alberta, where the Canadian Pacific Railway irrigation enterprises are, is particularly fortunate. Perhaps no other part of the North American continent has a climate so suitable for agriculture, and so healthful, invigorating and enjoyable for the residents, as is found in Southern Alberta.

People who look at the map, and remember how cold it sometimes is in Illinois or Iowa or New York, may be excused for thinking the climate of Alberta must be very severe. They should remember, however, that there are many things besides latitude which determine the climate



IRRIGATION OPERATIONS

Irrigation farming is not only the most profitable kind of agriculture; it is the most interesting and enjoyable.

of a country. Even on the point of latitude they will find that the irrigation areas of Southern Alberta are no farther north than the north of France and a considerable part of the British Isles. Just as the warm Gulf stream tempers the climate of north-western Europe, so do the warm Chinook winds, blowing up from the valleys of the Rocky Mountains, temper the climate of Alberta. The country is one of pleasant temperatures; never too hot; occasionally cold, but not for long periods; with clear skies and bright sunshi e winter and summer; with very little snowfall (sleighs are seldom if ever used in Southern Alberta) and a varying amount of rainfall, which comes mostly in the months of June and July.

Although Southern Alberta is an ideal irrigation country, it must not be supposed that it is desert or arid. There is a considerable difference in rainfall in different sections, and in different seasons. Some years there is enough rainfall over the entire country to grow good crops by natural means, and particularly by dry farming methods; in other seasons the wet districts have little enough rain and the drier sections must depend on irrigation for successful crops. Even in the wettest seasons irrigation, when intelligently applied, has been found to be very beneficial to crops.

One thing has been positively proven in Southern Alberta—whenever there is enough moisture there are bumper crops. The years 1915 and 1916 were unusually wet, so that the whole country shared the benefits which would otherwise have been limited to the irrigation districts, and in these two years Southern Alberta produced the greatest grain crops on the American continent. The soil and the climate are right, and only moisture is needed to assure a prosperity which very soon places the new settler in a position of independence and on the high road to wealth.

The table following shows the mean temperature in Southern Alberta each month for a period of seven years:—

| | 1909 | 1910 | 1911 | 1912 | 1913 | 1914 | 1915 |
|----------------|-------|-------|-------|-------|-------|-------|-------|
| January..... | 4.11 | 19.74 | 18.91 | 12.83 | 1.52 | 16.30 | 17.06 |
| February..... | 12.17 | 18.89 | 21.10 | 26.39 | 10.92 | 16.50 | 19.98 |
| March..... | 30.22 | 39.85 | 34.60 | 21.96 | 18.58 | 31.00 | 28.67 |
| April..... | 32.10 | 46.00 | 36.28 | 41.25 | 42.31 | 42.80 | 49.23 |
| May..... | 47.01 | 50.48 | 47.25 | 50.03 | 46.15 | 50.80 | 49.99 |
| June..... | 57.06 | 59.96 | 57.58 | 59.81 | 57.65 | 57.70 | 53.60 |
| July..... | 61.30 | 62.20 | 58.00 | 56.32 | 58.29 | 66.50 | 58.63 |
| August..... | 59.05 | 55.06 | 54.35 | 57.38 | 59.65 | 61.80 | 67.00 |
| September..... | 55.00 | 49.73 | 47.38 | 46.48 | 48.48 | 53.30 | 49.00 |
| October..... | 40.48 | 43.52 | 40.33 | 40.00 | 36.20 | 44.60 | 47.30 |
| November..... | 19.65 | 26.70 | 18.56 | 31.60 | 27.91 | 32.00 | 29.33 |
| December..... | 13.45 | 22.90 | 20.90 | 28.10 | 22.26 | 14.10 | 24.80 |

The rainfall at Lethbridge, in the Lethbridge Irrigation District, is shown by the following table. In some of the irrigated sections a somewhat lighter rainfall is recorded.

| | |
|------------|-------|
| 1909 | 16.15 |
| 1910 | 11.89 |
| 1911 | 20.04 |
| 1912 | 21.30 |
| 1913 | 17.38 |
| 1914 | 17.36 |
| 1915 | 17.27 |

Average for 7 years 17.34

Evidence of the healthfulness of Western Canada is furnished by the following statement obtained from official sources showing the death rate per thousand population in a number of Canadian and American cities. The table speaks for itself:

| | |
|----------------------|------------|
| Baltimore..... | 18.1 |
| Boston | 14.1 |
| Calgary | 8.7 |
| Chicago | 16.5 |
| Detroit | 15.5 |
| Los Angeles | 11.3 |

| | |
|------------------------|------------|
| Malden, Mass. | 11.8 |
| New York | 13.8 |
| Philadelphia | 16.1 |
| Pittsburg | 17.4 |
| San Diego | 11.4 |
| Vancouver | 9.0 |

RAILWAYS AND MARKETS

A glance at a map of Southern Alberta will show how well the irrigation districts are provided with railway facilities. The main line of the Canadian Pacific Railway runs through the full length of the Irrigation Block, and numerous branch lines are operated both through the Block and through the Lethbridge Irrigation District. Few countries so new as Southern Alberta can offer to the intending settler such splendid railway transportation.

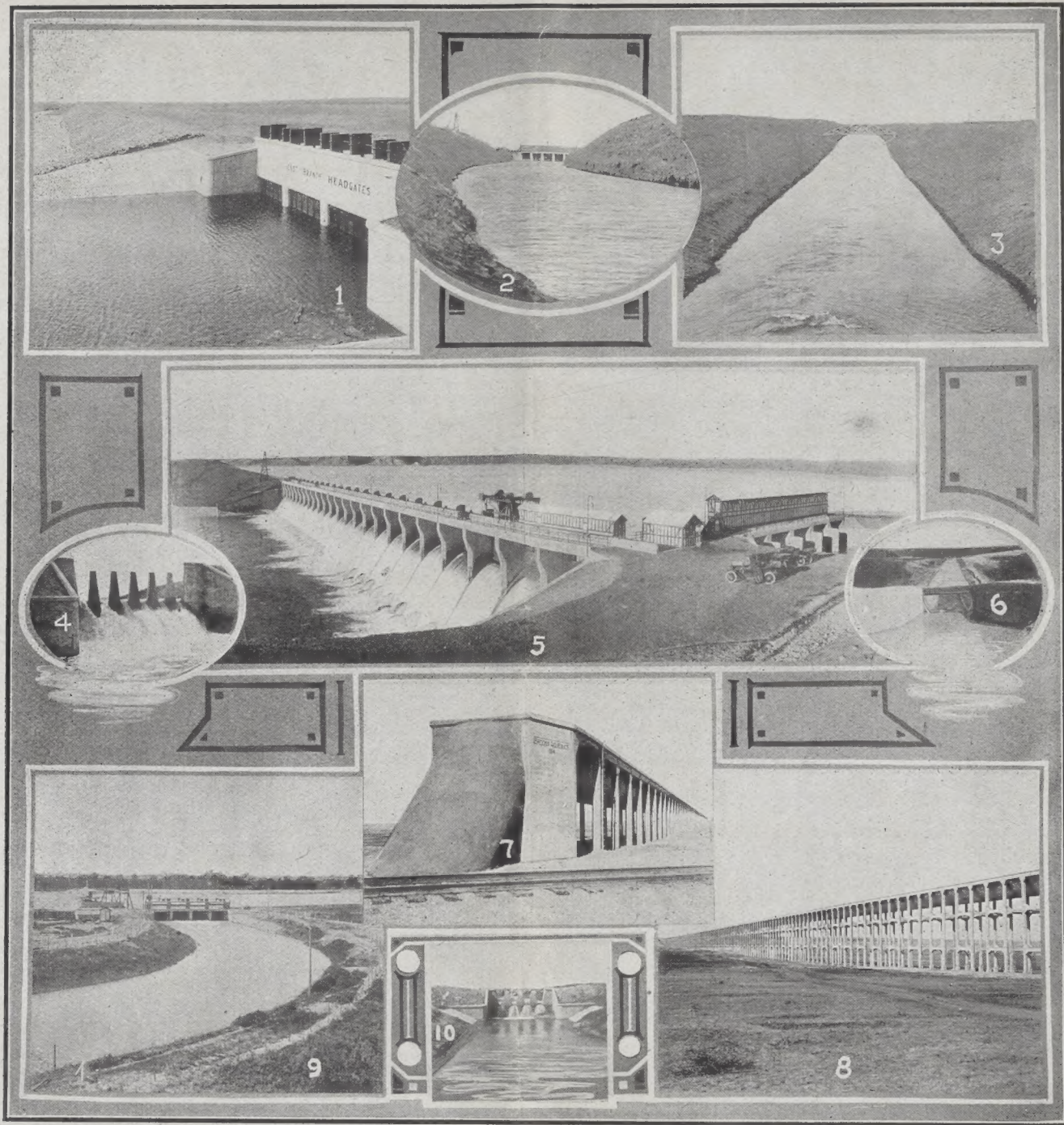
The same is true of markets. The irrigation area of Southern Alberta lies as a sort of triangle, at each corner of which is an important city. Near the eastern apex of the triangle is Medicine Hat, a manufacturing and commercial centre of about 10,000 population. The city is famous for possessing the greatest natural gas resources in the world. At the south-west corner of the triangle is Lethbridge, with about 12,000 people. Lethbridge is an important mining and agricultural centre. It is famous for the grain, alfalfa, and livestock products of the district, and also for its coal, which is of fine quality and supplies the fuel for a great part of Western Canada. In the busy season about 4,000 tons of coal are mined daily at Lethbridge. There is a splendid Dominion Government Experimental Station at Lethbridge, where experiments both in dry farming and irrigation farming are conducted.

Calgary, a city of some 60,000 people, lies at the north-west corner of the triangle. It is a fully modern and up-to-date city in every respect, with 400 retail stores, about 200 wholesale stores, 90 manufacturing concerns, 36 public schools and 23 banks. These cities in themselves afford large markets for the products of the irrigated farms; and facilities for exporting farm produce have been developed to a very high degree. There are also, throughout the irrigation country, many smaller towns dotted all along the lines of railway, each with its stores, elevators, implement warehouses, blacksmith shops, newspaper, banks, hotels, schools and churches.

ENGINEERING FEATURES

The settler may not feel so directly interested in the engineering features of an irrigation district as he is in climate, soil, water, etc., but after all the engineering features are of very great importance, because on them depends the successful working of the whole system. If the engineering work is of a make-shift nature the settler may very well hesitate about throwing in his lot; but if it is of a permanent, substantial character, showing that those who provided the money were building for all time, this fact should give the settler very great confidence in the undertaking.

The Canadian Pacific Railway invites all intending settlers to make a personal examination of the engineering features which are a part of its irrigation projects. Following the Bow River down from the mountains, the first irrigation works are found at the city of Calgary, where, by means of concrete headgates, water is admitted into the main canal. During the normal flow of the river it is not necessary to raise the water for this purpose, but to provide against the possibilities of a very dry season, a reinforced concrete dam has been built across the river at this point. This dam is so constructed that the water is allowed to run through, unless it may be necessary to hold it up, which can be done by raising a device known as a "bear trap,"



These Views show the permanent types of construction used by the Irrigation Systems controlled by the Canadian Pacific Railway:

(1) Concrete Headgates, East Branch, Eastern Section. (2) Concrete Headgates and Main Canal, Eastern Section. (3) One of the Main Canals, Eastern Section, showing Rating Station. (4) Concrete Drop or Fall, Western Section. (5) Diversion Dam and Headgates on Bow River, Eastern Section. (6) Metal and Concrete Flume, Western Section. (7) Concrete Aqueduct, Eastern Section, 2 miles long with siphon under C.P.R. main line, 900 second-feet capacity. (8) Another view of No. 7. (9) Diversion Works, Western Section, on Bow River, Calgary, Alberta. (10) Concrete Drops or Falls, Eastern Section.

and by placing stop-logs in the other openings, which is done by an electric machine designed for the purpose.

It is from this point that the water is supplied to the Western Section, which is composed of 1,039,620 acres, of which about 223,500 acres are irrigable. Through the main canal, already mentioned, the water flows a distance of 17 miles, when it is delivered to a reservoir three miles long and about a mile wide. From this reservoir the water is carried out in three secondary canals, which have a total length of 254 miles. These canals supply the water to 1329 miles of distributing ditches, which bring the water to each parcel of land irrigated. The Company brings the water, through these distributing ditches, to the highest available point on the boundary of the settler's farm. From that point the settler takes charge of the water himself, distributing it over his fields by means of his own ditches, but the Company's engineers are always glad to advise him, without charge, concerning the location and construction of his ditches.

To supply water to the Eastern Section it was necessary to raise the level of the Bow River about forty feet, and the famous Bassano dam was built for this purpose at a point about three miles from the town of Bassano. This dam consists of a reinforced concrete structure across the original river channel and a high earthen embankment, faced with concrete, across the river valley. The concrete structure is 720 feet long between abutments, with a maximum height of 40 feet to the overflow crest, above which eleven feet of water are retained by 24 sluice-gates, electrically operated.

The earthen embankment is some 7,800 feet in length, and extends from the south end of the spillway until it meets and merges with the sloping ground running down to the river. At its highest point it is 350 feet in width at the base; and it contains about one million cubic yards of earth. The spillway contains some 40,000 cubic yards of concrete and 2½ million pounds of reinforcing steel.

Close to the concrete spillway are the headgates, of steel and reinforced concrete, operated by electricity. They control a discharge into the main canal of 3,800 cubic feet per second. The main canal carries the water five miles, when a reservoir is formed, from which the water is carried in two secondary canals. The process of distribution through main canals, secondary canals, and distributing ditches, is the same as in the Western Section, already described, but aggregating about 2,500 miles.

Another feature of interest is the great artificial reservoir a few miles from the town of Brooks, which has been named Lake Newell. It is supplied with water from the Bassano dam, and has been created out of a natural depression in the prairie, by the construction of a number of earthen dams, the largest of which is about 2,000 feet long and 30 feet high. This reservoir has an area of about 25 square miles, and a storage capacity of 185,000 acre feet; that is, sufficient water to cover 185,000 acres one foot deep.

A few miles from Lake Newell water is carried across a great depression in the prairie by means of a reinforced concrete aqueduct two miles long and, at places, over 50 feet high. This is known as the Brooks Aqueduct, and is plainly seen from the main line of the Canadian Pacific Railway a few miles east of the town of Brooks.

The area of the Eastern Section is 1,156,224 acres, of which about 400,000 acres are irrigable.

The Lethbridge Section did not require engineering features on the scale of some of those already described, but in all the irrigation systems of the Canadian Pacific Railway Company, will be found engineering works of the most modern design and the most permanent quality.

RESULTS FROM IRRIGATION

But while the farmer may be interested in the theory of irrigation, and in the engineering feats which are necessary to bring the water to the boundary of his farm, his great question is—"What results do you get from irrigation? How does it work out in actual practice?" That question will now be answered.

To ascertain just what benefits were to be derived from irrigation in Southern Alberta, a series of experiments was undertaken by the Dominion Government Experimental Farm at Lethbridge. This farm is divided into a "dry" and "irrigated" section, and as it is the business of the manager to produce the best results possible on each section, the conclusion arrived at may be accepted as absolutely unbiased.

With this fact in mind the figures from the Farm Report furnish interesting and convincing reading. Comparing the results secured under natural rainfall conditions with results secured under irrigation, the following crops show, as the result of adopting the latter, the percentage of increase set opposite each:—

| | | | |
|-------------------|------|-----------------------|------|
| Potatoes | 260% | Mangolds | 102% |
| Turnips | 200% | Field Peas | 73% |
| Sugar Beets | 184% | Barley (two-rowed) .. | 69% |
| Carrots | 141% | Barley (six-rowed) .. | 45% |
| Corn | 128% | Spring Wheat | 33% |

The highest yielding wheat under irrigation, covering two years, went 43½ bushels per acre. The same wheat without irrigation yielded 33 bushels per acre during the same period. In six-rowed barley the figures were 61½ and 48¼ bushels respectively. Two-rowed barley under irrigation yielded 65, and without irrigation 49¼ bushels per acre. Potatoes made a remarkable showing under irrigation. The figures were 64½ bushels per acre as compared with 149½ without irrigation. Sugar beets yielded 24¼ tons per acre under irrigation, and 6¼ without. Mangolds, 25 tons per acre and 13½ without. Turnips about the same. Carrots, 15 tons under water and 6½ tons under dry land culture. Fodder corn yielded 15½ tons under irrigation as compared with 6¼ tons without.

The following table shows the average yield under irrigation and non-irrigation for six years:

| | Irrigated 6-year Average | Non-irrigated 6-year Average |
|----------------|-----------------------------|---------------------------------|
| Wheat | 46 bushels | 23 bushels |
| Oats | 101 " | 59 " |
| Barley | 73 " | 34 " |
| Potatoes | 492 " | 233 " |

These figures show that for the period of six years, wheat under irrigation yielded an average of 20 bushels per acre more than under dry farming; oats yielded 42 bushels more, barley 39 bushels more and potatoes 259 bushels more. It should also be noted that under irrigation very successful crops of alfalfa were grown which not only were very profitable in themselves, but maintained and increased the fertility of the soil.

Another feature of much importance is the fact that, although the irrigated area of Southern Alberta is naturally treeless, the introduction of water makes possible the growth of a number of varieties of trees which thrive wonderfully under irrigation conditions. Belts of these trees are of great value, not only for the beauty which they add to the landscape, but for affording shelter and providing places where small fruits can be grown to the best advantage. The farmer who has a portion of his land under irrigation may in a few years be the possessor of a very beautiful home, surrounded by trees, and producing the finest fruits and vegetables both for his own use and for sale.

At Strathmore, in the Western Section of the Canadian Pacific Irrigation Block, the Dominion Government in the season of 1914 conducted experiments to ascertain the amount of water which could be used to best advantage in irrigating under conditions such as exist there. Incidentally, evidence was secured of the advantages of irrigation. The land used had been summer-fallowed the previous year, which made it favorable to showing good results from dry farming, but the yields demonstrated overwhelmingly the advantage of irrigation. The best yield of Red Fife wheat obtained without irrigation was 16 bushels per acre, while with irrigation, 42.8 bushels per acre were secured. The result with Marquis wheat was even more striking. Without irrigation it yielded 16.8 bushels per acre, and with irrigation the yield was 50.1 bushels per acre—an advantage in favor of irrigation of 33.3 bushels per acre. One variety of peas yielded 12.5 bushels per acre more with irrigation than on dry-farmed summer-fallowed land, and another variety showed an increase under irrigation of 13.3 bushels per acre. No comparison of the benefits of irrigation on oats and barley were secured but there is no reason to doubt that they would have shown similar advantages for irrigation.

The above figures demonstrate very clearly the benefits of irrigation for grain and vegetable crops in Southern Alberta, and for fodders such as alfalfa and timothy its value is even greater. The fact is that irrigation assures the farmer of a maximum crop every season. It also does away with the necessity of summer-fallow, which must be employed under "dry farming" practice. Thus irrigated land may cost more than non-irrigated land, and still be really cheaper, as it is not necessary to leave part of the irrigated land lying fallow each year. The irrigation farmer is able to crop every acre of his land every year, and, by rotating grain crops with alfalfa and roots, can not only maintain but increase the fertility of his soil.

WHEAT RAISING UNDER IRRIGATION

The advantage of irrigation to wheat is not as great as to many other crops, as the Experimental Farm results prove, but an increase of even thirty-three per cent. is not to be despised, and will well repay the extra labor and water rental. The difference in cost per acre, between conserving moisture by summer-fallow and providing it by irrigation, is largely in favor of irrigation. The value of irrigation as crop insurance should also not be overlooked. The loss of a crop in a dry season gives the farmer a serious set-back, which consumes the profits of several good years. By irrigation he not only reaps a better crop under ordinary circumstances, but is also protected absolutely against the partial or total loss of a dry season. One such loss would pay his water rental and the cost of applying the water for many years. Irrigation is crop insurance, with this important difference: when you insure you know that, on the average, you will pay out more money than you get back, otherwise the company could not continue in business, but when you irrigate you know that you will get back more than you pay, because you are dealing with Nature, who is not governed by the ordinary laws of economics. If it is logical and wise to insure your property against fire—and it is—surely it is still wiser, by means of irrigation, to insure your crop against drouth.

There is only one good argument against raising wheat under irrigation. It is that irrigated land will produce other crops of greater value, such as alfalfa. But it takes time to get a whole farm under alfalfa; wheat can be profitably grown in the meantime, also for rotation after alfalfa has been established.

ALFALFA THE KING OF IRRIGATED CROPS

The most successful crop grown under irrigation is alfalfa. This is true, not only of Southern Alberta, but of the irrigated areas of the United States. In this connection the following tables, showing the proportion of areas devoted to various irrigated crops in the United States, may be of interest:

| Nature of Crop | Percentage of Area |
|---|--------------------|
| Alfalfa | 30.6 |
| Wild, Salt, and Prairie Grass | 21.1 |
| Oats | 10.2 |
| Wheat | 7.6 |
| Barley | 3.3 |
| Orchard Fruit and Grapes | 3.3 |
| Other Tame and Cultivated Grasses | 3.0 |
| Grain, cut green | 2.9 |
| Timothy alone | 2.8 |
| Sugar Beets | 2.5 |
| Timothy and Clover mixed | 2.5 |
| Potatoes | 2.3 |
| Corn | 1.8 |
| Tropical and Sub-tropical Fruits | 1.4 |
| All others | 1.6 |
| | 9.99 |

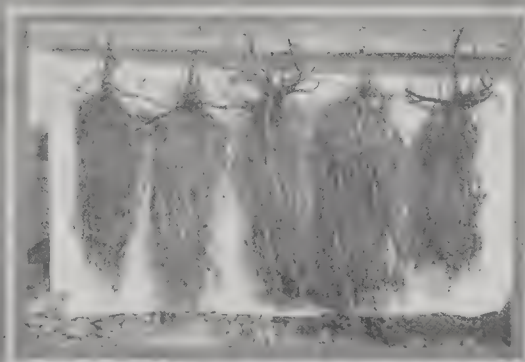
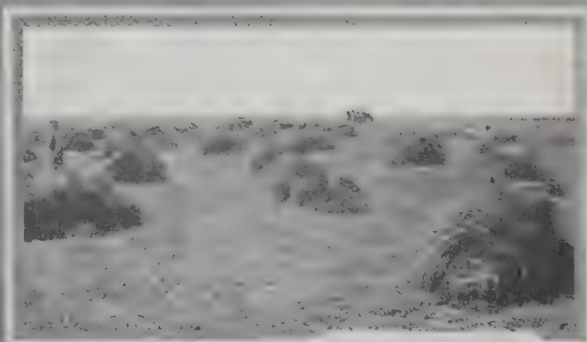
This table is very important, as there is an opinion among many farmers that irrigation is useful mainly for growing fruits and vegetables. This table must convince the reader that the great value of irrigation is found in growing pasture crops and fodders, of which alfalfa is chief.

As a forage crop alfalfa excels all other crops in yield, low cost of production, feeding value and beneficial effect upon the soil. It has now been grown successfully in this portion of Alberta long enough to prove its hardiness and suitability to the climate and conditions. It is only necessary for the farmer to realize the ease with which this crop can be grown, its value as a food for all classes of livestock, and its beneficial effect upon the soil, in order for him to become an enthusiast over alfalfa and irrigation.

For the benefit of those who have not in the past had personal experience with alfalfa, some space may be devoted to its value as a fodder plant, and as a preserver of soil fertility. The valuable part of all feeding stuffs or foods can be divided into three principal parts, namely: protein, carbohydrates and fats. The protein is that portion of the food containing nitrogen, and is often designated as the "flesh-forming" constituent.

It is believed that, to at least a certain extent, the fats and carbohydrates of food can take the place of each other, but none can take the place of protein. This must be in the food itself. It is a well-demonstrated fact that most of the common forage crops grown and fed, such as timothy and prairie hay, corn fodder, etc., do not contain enough protein, and hence, cannot become an economical ration, either for the animal fed or for the feeder's pocketbook. Alfalfa, clover hay and most other legumes, however, always contain an excess of protein, and so can be profitably fed, either alone or with other feeds that are deficient in this food, for it has been found that a ration had better contain too much than too little protein, provided the excess is supplied from alfalfa hay when this is produced at a reasonable price.

Experiments conducted by the Wisconsin State University show that alfalfa crops produced protein valued at \$51.75 per acre; the value of red clover on the same basis was \$17.51 per acre; timothy, \$5.75; the value of brome grass, \$4.16 per acre. These values would, no doubt, vary in different localities, but there is no reason to doubt that



IN THE ALFALFA COUNTRY

Alfalfa is the "King of Fodders," and the Irrigation Districts of Western Canada are the great Alfalfa-producing centres. Livestock and prosperity follow Alfalfa.

the proportions would be about the same in the irrigated districts of Southern Alberta.

Experiments based on actual tests show that with pork at eight cents a pound an acre of alfalfa pasture will produce pork to the value of \$47.34. The Kansas Experiment Station reports that a gain of 800 pounds of pork was made from the feeding of one ton of alfalfa. This value is based on pork at eight cents a pound, but at the time of printing of this booklet, and for some months previous, live hogs were selling at Calgary at \$12.00 per hundredweight and as high as \$14.50. In a country such as Alberta, where the climate, water, freedom from disease, and all natural conditions are favorable to hog-raising, the profits which can be made out of alfalfa when used for this purpose must be apparent. It is granted that the gain in hogs will be more rapid when some grain is added to the alfalfa ration, but this also is an argument for hog-raising in the irrigation districts of Southern Alberta, as nowhere can grain be produced more abundantly than here.

ALFALFA AND THE DAIRY COW

The advantage of alfalfa when used as a fodder for dairy cows is quite as pronounced as when fed to hogs. Experiments at Illinois Experiment Station showed that, by actual test, an acre of alfalfa produced \$91.83 more milk than an acre of timothy. This price is based on milk at \$2.00 per hundred pounds. This, of course, is a good price for milk, but does not exceed the average paid by dairy companies at Calgary, Lethbridge and Medicine Hat for some years back.

There is a great field for the development of a dairy industry in Southern Alberta. The cities above mentioned, actually on the edges of the irrigation country, are in themselves great consumers of milk, cream, butter and cheese. Aside from this, the Alberta Government gives assistance to creameries, and so regulates and provides for the marketing of butter that a good market is at all times assured. Alberta butter is of excellent quality, largely on account of the favorable climate and feeding conditions. The cool nights of Alberta are essential to the best care of milk—the great dairy districts of Europe are all in northern latitudes. Much Alberta butter is shipped to British Columbia, the Yukon, and other outside markets, where it bears a most favorable reputation. At Strathmore, in the Western Section, the Canadian Pacific Railway Company's Supply Farm affords a good market to settlers who wish to sell their milk. The dairyman in Southern Alberta has every advantage: good climate, good markets, and soil which will produce alfalfa and other fodders in great abundance. This land can be bought at a fraction of the cost of good dairy land in old settled states, and on terms which bring it within the reach of almost every farmer.

In thinking of the dairy possibilities of Southern Alberta, it should be remembered that irrigation is not a thing of a year or two, but will continue through the centuries. No one who has a knowledge of the country's resources can doubt the future that lies before Western Canada. As the population increases, the advantage of having a farm, convenient to large cities, in a district of exceptionally good climate, and where the risk of failure has been removed by the artificial use of water, will grow more pronounced with every passing year. Now is the opportunity to get such a farm at low cost and commence at once to share in the country's prosperity.

BEEF STEERS ON ALFALFA

For some of the data in this booklet we are indebted to older districts, where more exhaustive experiments have been carried on than has been possible in a young country like Southern Alberta. But here we are able to add the

experience of a farmer who has been raising alfalfa on irrigated land in Southern Alberta for some years, and whose results from feeding alfalfa to steers are outlined below.

The lot of steers referred to were wintered in the Irrigation Block east of Calgary, and were sold in Calgary in March, 1916, at a price of \$7.55 per hundredweight, which averaged out at \$106.61 per steer. There were 34 steers in this lot; the average weight was 1,412 pounds per steer, and it isn't necessary to tell the farmer reader that the grower got a handsome return from his alfalfa field.

The steers were run on the stubble fields until the first of January, 1916, when feeding was started with about half a ton of oat sheaves and half a ton of alfalfa per day, divided among 55 animals. Feed was given at this average rate for the first 35 days. For the next 45 days the cattle had one full load of sheaves and one load of alfalfa each day, the oat sheaves being fed in the morning and the alfalfa at night. By this system the cattle ate the best of the grain in the morning and in the evening the alfalfa was thrown over the straw which was left. This resulted in practically all the straw and alfalfa being eaten together and a splendid gain resulted. Following the cattle about 25 sows were kept in good condition without other feed. The best steers were Aberdeen-Angus grade. There were a few Herefords, and the rest Shorthorn stock.

Mr. Ben Cool, the farmer who marketed these steers, started growing alfalfa in the Western Section of the Irrigation Block in 1912, and has increased his acreage until he has 90 acres in alfalfa. From his older fields he is now harvesting about three tons of alfalfa per acre. He is naturally much pleased with the feeding value of alfalfa considering the fine profits it has given him from his herd of steers.

ALFALFA FOR LAMBS

Experiments in wintering lambs on alfalfa have been conducted for some years at the Dominion Government Experiment Station at Lethbridge, Alberta, in the Lethbridge Irrigation District. Results of the test are quoted briefly below, and show beyond question the suitability of alfalfa for this purpose, and the high money returns which may be realized from this crop.

The lamb feeding test with lambs fed on alfalfa which is being conducted at the Lethbridge Experimental Station consists in feeding two groups, one a relatively short period and the other to be sheared and fed much longer. There were 479 wether lambs obtained in all, purchased at \$5.00 a head for the run of the bunch. They were allowed to run on stubble until November 18th, 1915.

As has been the case with the previous lamb feeding experiments on the Station the prime object has been in each case to determine the feasibility of disposing of alfalfa hay by feeding it on the farm. Throughout the feeding test the only roughage used has been alfalfa hay.

The feeding test was begun on November 18th. They were fed twice a day in combination racks and were always given as much alfalfa hay as they would clean up. For twelve days they were fed on hay with no grain. The grain fed was equal parts of barley and oats fed whole. In starting to feed grain but two ounces per head was given. The increase was made gradually at the rate of between two and three ounces a week. Both lots had access to water at all times. They were fed in corrals with open shed sheltering them on the west.

A value of \$12.00 per ton was put on the alfalfa hay fed, and \$20.00 per ton (or one cent per pound) on the grain fed.

The first group was sold at \$9.75 per 100 pounds, weighed at the Lethbridge Stockyards without shrink, and showed a net profit on the group of \$417.57, or \$1.75 per lamb.

Returns for the second group were not complete at the time of the report, but were probably equally favorable.

No account is taken of labor as it is difficult in experimental feeding, where great care must be used in getting the exact weights of feed given, etc., to arrive at anything approaching a fair and reasonable charge for this item. However, the alfalfa fed is put in at a high enough value, so that a farmer can well afford to feed. The labor necessary in feeding when a good-sized bunch of lambs are used would certainly not be greater than if a farmer had to bale and deliver on cars the same hay.

It is well to point out that should a farmer come out even with no net profit he would still be disposing of his alfalfa hay at a good price (\$12.00), and have the manure left on the farm, which in the long run is a point that is worth considering. The net profit is his leeway for protection in case he should buy on a high market and happen to sell on a weak one.

When a farmer can sell his alfalfa to his stock at \$12.00 a ton, and make a good profit on the stock, there isn't much question as to the future of alfalfa growing and stock raising in the irrigated districts of Southern Alberta.

ALFALFA AS A FERTILIZER

Although alfalfa, as has been pointed out, has more feeding value than any other forage crop, it has also other advantages. Its importance as a fertilizer is second only to its feeding value.

In order to produce grain crops year after year something must be done to maintain the fertility of the soil. The three principal elements which the farmer must preserve in his soil are nitrogen, phosphorus, and potassium, which are present in most soils in rather limited amounts, and are of extreme importance, for they are required by plants in very considerable quantities. Whenever the available supply of either nitrogen, phosphorus or potassium becomes too much reduced in a soil the yield of the crops is very much reduced also. The soil of Southern Alberta, as it has never been leached by the rains of centuries as have the humid soils, is more liable to contain a sufficient supply of both potassium and phosphorus, the nitrogen being the only highly important element in which it may be deficient.

Nitrogen being the chief element, it is considered that the farmer who can produce good yields of alfalfa is indeed fortunate, for he not only secures the profits from the feeding of the crop, but, in addition, maintains and even increases the nitrogen content and fertility of his soil so as to be enabled to produce far larger crops after ploughing up the alfalfa than he is able to produce on adjoining lands where the alfalfa and other legumes have not been grown. Alfalfa enriches the soil in two ways: it takes the nitrogen out of the air and stores it in the soil, and its multitude of thick, fleshy roots, when they decay, also add to the fertility. This is why a field in alfalfa grows richer every year, whereas a field in grain crops, unless it is frequently fertilized, will grow poorer year by year.

Other advantages of alfalfa are: After the crop is once started it does not require re-seeding from year to year; many harvests can be taken from one sowing. The same is true of cultivation. It requires no threshing or binder twine, and, if fed on the farm, no hauling to market. It does not suffer readily from adverse weather conditions, and, under irrigation, is a practically certain crop. It may be said to be the ideal farm crop, and it is grown with the greatest success in the Irrigation Districts of Southern Alberta. The average cutting is two crops, occasionally three, and yields run from two and a half to four tons per acre per season.

OTHER FODDER CROPS

Aside from alfalfa there are, of course, other fodder crops which are grown on the irrigated lands of Southern Alberta with great success. Timothy is extensively cultivated, and yields frequently as much as three tons to the acre. There is a splendid market for timothy in the mining and lumbering districts of British Columbia.

The pride of Southern Alberta is its wild grasses, and nowhere can better quality in greater quantity be found. They are not only good as to kind but more nourishing because of the excellence of the soil upon which they are grown. The abundance of sunshine also tends to make grasses more nutritious. Nearly a hundred species of true grasses and many sedges and rushes are native, being found intermixed throughout prairie and slough, from a few inches to six feet and over in height. All these go to the making of the ranges justly so celebrated for the production of beef and mutton. There are also found a few dozen species of leguminous plants, the pea-vines, vetches, etc.

OATS AND BARLEY

All Western Canada is famous for the quality of its oats. At the International Soil Products Expositions, year after year, the highest awards have been given to Western Canadian oats, and the same is true of barley. Three years in succession Southern Alberta barley was awarded the world's prize.

Under irrigation the production of both oats and barley is greatly stimulated, and heavy crops are assured every season. Yields of oats of 100 bushels per acre and more are quite common, and barley shows proportionately good results. The oats are very heavy and plump. While 34 pounds is the standard Canadian weight for a bushel of oats, Alberta oats are on record which weighed 48 pounds to the measured bushel, and the statement was made by the Dominion Grain Inspector for the Province that 85 per cent. of Alberta oats examined by him would weigh over 42 pounds to the measured bushel.

FLAX

Although not grown in such great quantities as wheat, oats or barley, flax is an important product of Alberta. The soil and climate are well suited to this crop. A good average yield is secured and some very heavy crops are on record. Premost flax, a variety which has been developed by the Canadian Department of Agriculture, is on record as having yielded 29.63 bushels per acre on a large field of breaking in Southern Alberta. Flax is used mainly as a crop on new land, where there is not sufficient time to get the soil prepared for wheat. Fields of flax in the Lethbridge District in 1916 averaged 32 bushels per acre.

THE FIELD PEA

The field pea of Southern Alberta is different from the field pea as it grows anywhere else in the world. It might almost be a different plant. The reason lies in the difference in the climate. Southern Alberta is high and has a temperate climate. It has warm sunshine and almost no cloudy weather at all, and the air is very dry.

The field pea is very hardy, standing quite severe frosts without injury. Field peas in Southern Alberta are drilled in, or sometimes sown broadcast and plowed under early in the spring. The peas sprout quickly and grow rapidly. The crop receives no cultivation, but is irrigated by flooding just like other grain, until the vines cover the ground, and then the farmer is through working his peas.

CORN

Corn is not grown very extensively in Southern Alberta, although as a fodder crop it seems to be gradually coming



LIVESTOCK

Southern Alberta has long been famous for its Livestock, and Irrigation brings many advantages not known in the old ranching days. Irrigation farmers are Livestock farmers.

into favor. Some very fine crops are grown under irrigation, and silos are making their appearance at various points. The Southern Alberta farmer, however, seems to pin his faith more on the other fodders—alfalfa, timothy, native grass, oats and barley. Experience has shown that these fodders produce a better beef animal and a better hog than is possible on a corn diet, and as they can be grown in these irrigated areas cheaply and in great abundance they solve the fodder question. There seems no doubt, however, that from year to year corn will be found taking a larger place in the fodder crops of the irrigated districts.

ROOTS AND VEGETABLES

All varieties of roots and vegetables usually grown in temperate climates are profitable under irrigation in Southern Alberta; and owing to the great increase in population during recent years, caused by the influx of immigration, there is a large and constantly expanding market for all varieties of garden produce—a market so large, indeed, that supplies have to be called in from outside to meet the demand. Irrigation is especially suited to the intensive methods of agriculture necessary with garden truck.

SUGAR BEETS

Wonderful possibilities lie before the sugar beet industry in the irrigated areas of Southern Alberta. Experiments which have been conducted prove that beets produced in these irrigation districts show a sugar content as high as twenty per cent., and the records of the Dominion Government Experimental Station at Lethbridge show a greater tonnage per acre and a higher sugar content than the average in the United States. Tests made at Lethbridge from five different kinds of seed show a yield per acre of 17¼ tons, 16½ tons, 15½ tons and 9¾ tons. These yields were produced under irrigation. Crops obtained without irrigation ranged from 9½ to 12¾ tons per acre.

From the experiments that have been carried out there is no doubt that sugar beets of high quality can be produced in large quantities, either in the Canadian Pacific Railway Irrigation Block or in the Lethbridge Irrigation District. Development along these lines is only awaiting sufficient population, labor and capital. The Western Canadian Provinces are now consuming about 170,000,000 pounds of sugar each year. The production of beet sugar in Canada in 1915 was 37,000,000 pounds. There is little doubt that in time Canada will produce most, if not all, of her own sugar, and the irrigated areas of Southern Alberta will be a very large factor in supplying the necessary beets.

FRUIT RAISING

Although Southern Alberta is not represented as a fruit country, there are considerable possibilities before those who engage in small fruit raising under irrigation. Strawberries of heavy yield and fine flavor are produced. On the Canadian Pacific Railway supply farm at Strathmore, Alberta, are grown many of the strawberries used in the Company's dining-cars and hotels, where only the best are acceptable. Raspberries, blueberries, gooseberries, and the various varieties of currants are also successfully grown. All these fruits command high prices locally, as the supply is never equal to the demand, and the home-grown fruit reaches the consumer in a much fresher and better state than imported fruit. Apples have been grown successfully in the Lethbridge district. The great thing in fruit raising appears to be the providing of shelter belts of trees, and these grow very rapidly along the irrigation ditches. On the older irrigated farms the fields are now marked out with beautiful hedges of tall trees, which relieve all the bareness of the open prairie. Under irrigation, it is easier

to grow trees on the prairie where you want them, than it is to remove the trees in wooded districts from the fields where you don't want them, and the growth is so fast that a very few years work a wonderful change.

LIVESTOCK

The foundation of successful irrigation farming is the livestock industry. We have already dealt at some length with the fodder and grain crops produced so successfully under irrigation in Southern Alberta. These great crops, cheaply produced, combined with the clear air, fine climate, good water, and freedom from disease, and the fine markets of Western Canada, make Southern Alberta a mixed-farmers' paradise. Although grain crops may yield more rapid wealth, mixed farming is the sure road to success, and it is along that line that the Company hopes to see all its settlers advancing.

HORSES

In breeding horses, Alberta occupies a somewhat similar position to Canada that Kentucky does to the United States. Owing to the high altitude, dry and invigorating atmosphere, short and mild winters, its nutritious grasses and inexhaustible supply of clear, cold water, Alberta is pre-eminently known for her horses, which have become famous for their endurance, lung power, clean bone, and perfect freedom from hereditary and other diseases. There are, in Alberta, several grades of horses varying in point of quality from the hardy Indian pony (cayuse) to the beautiful, well-formed thoroughbred.

The largest and finest stud of pure-bred Percherons in the world is located in Southern Alberta. Horse breeders are getting high prices for whatever they have to sell, and there seems no doubt that this state of affairs will continue for many years.

CATTLE

The cattle industry of Southern Alberta has developed in three different directions: ranching, beef feeding and dairying. Cattle ranching is still one of the leading industries of Southern Alberta, and will, in many sections, continue to be so for many years to come.

The other development, which, in a measure, grew out of the first, was the production of finished beef and cattle under mixed farming conditions. Feeding steers were purchased from large ranchers and fed for export. Most feeders also had small breeding bunches of their own which, where settlement encroached and farms were fenced, became confined entirely to the owner's property. Southern Alberta has long been the recognized home of beef cattle of exceptional quality. The peculiar nutrition of the prairie and foothill grasses, the pure water and moderate climate, combine to favor the livestock industry.

It is an interesting fact that the City of Calgary is the home of the largest individual pure-bred cattle auction in the world. This takes place in the month of April each year, and on that occasion stockmen gather from far and near to purchase their bulls and to transact other business. Shorthorns, Herefords, Polled Angus, and Galloways are the chief beef breeds, while Holsteins and Ayrshires are produced for dairy purposes.

WINTER FEEDING

Another important industry is the winter feeding and finishing of steers. Progressive farmers are now feeding a number of steers during the fall and winter, placing them on the market the following spring. Many of those who follow this business are men who came to Southern Alberta from the "corn belt." But they are making money; and the word they send back to the Mississippi Valley has had

the effect of bringing out every year more of their neighbors eager to take advantage of these golden opportunities.

DAIRYING

It may be said that there is no portion of Southern Alberta where dairying cannot be profitably carried on. Important advantages are the uniformly cool nights, the splendid water and the great and increasing market for dairy products. An abundance of succulent feed can be produced at little cost and with the greatest possible certainty of result. Irrigated fodder crops seldom fail. The irrigated farm, with abundant water in every pasture, grasses succulent long after the prairie herbage has dried up, coupled with the favorable climate of Southern Alberta for dairying and the unequalled markets, will surely appeal to those who are now following dairy farming in the densely populated portions of America, and paying out most of their profits in purchasing feed in addition to what they are able to produce on their expensive lands, or, perhaps, paying more money in rental than would buy a farm in Western Canada.

Only second in importance to the ease with which large crops of fodder can be raised in Alberta, is the Provincial Government's policy for the encouragement of dairying in Alberta. Competent authorities state that no province or state on the continent has a system that surpasses that of this Province.

Under the supervision of the Dairy Commissioner, co-operative groups of farmers have the establishment of creameries in their own hands; the Government advances, on long-time terms and upon very reasonable conditions, \$1,500 toward the erection of each creamery, and markets the butter.

The system in vogue is briefly as follows: All cream delivered is graded, the farmer supplying the highest quality receiving a higher price. At the end of the month each farmer receives a cheque for 90 per cent. of the estimated selling value of the butter made from his cream. The Government takes charge of the butter, grading it and placing it in storage until prices are favorable, each creamery's butter being marked. When market conditions are right, the butter is marketed, and the creamery paid; in turn, the farmer receives a cheque for the balance due him. The Government deducts sufficient to cover the cost of freight, storage, marketing and supplies furnished. The average price received at the creameries during the past season was over 30 cents per pound. The services of the Government are extended to all creameries that grade their cream, whether under Government supervision or not.

SWINE

Nowhere is hog raising more successful than in the irrigated areas of Southern Alberta. Feed is produced cheaply and in great quantities, there is plenty of good water, disease is almost unknown, and there is a splendid market. At the time of printing this booklet prices for live hogs at Calgary were ranging around \$14.50 per hundred-weight.

Climatic conditions in Southern Alberta are such that expensive hog buildings are not necessary. A few small frame buildings containing two or three farrowing pens, 8 x 8 feet each, built of boards with the cracks battened, and a roof that does not leak, will answer the purpose admirably, especially if they are built on skids and can be drawn around to different pastures, wherever needed.

It is also worthy of note that Western Canada's grains and alfalfa produce a better hog than can be fattened on corn. Grain is produced cheaply and in great quantities, and the same is true of alfalfa. With such conditions the profits from hog raising are large and certain.

The hog raiser from further south soon forgets his faith in corn as a feed when he has gained experience with barley, which gives large crops, has excellent fattening qualities, and produces an exceptionally sweet pork. All varieties of swine thrive and do well on the Alberta farm. Settlers from Eastern Canada generally prefer the improved Yorkshire, the Tamworth, the bacon type Berkshire, or crosses between these breeds. Those from the United States are more inclined to favor the Chester White, the Poland China, the Duroc Jersey or the Hampshire.

SHEEP

Sheep raising is carried on in Southern Alberta under two widely different methods. Where general agriculture is pursued, sheep raising is conducted in much the same way as elsewhere. Some farmers have small flocks, which are kept in closed pastures during the summer season and are fed in more or less enclosed sheds during the winter. Sheep raising on a large scale is carried on entirely under the ranching system.

No class of livestock thrives better, is more profitable, or gives quicker returns, than sheep. This industry is growing rapidly in Southern Alberta. Many farmers are starting small flocks. The absence of winter rains is a great consideration to the sheep raiser. Mutton commands a good price, and wool is so high that it is literally making fortunes for those who were far-sighted enough to go into the business some years ago. Most of Alberta's wool crop is bought by manufacturers from the Eastern States, who regard the Alberta wool with great favor. It has also been well received in England. The Government gives valuable assistance in the grading and marketing of wool. The average price realized by Alberta wool growers in 1916 was over 30 cents a pound.

POULTRY

Poultry rearing on the irrigated farm may either be prosecuted as a leading business or as a side issue. There is a large and profitable field in Southern Alberta for the industrious and experienced poultry raiser. With eggs never lower than 25 cents, and generally ranging from 35 cents to 60 cents per dozen in the Calgary market, nothing further need be said regarding the profits from this valuable branch of the irrigated farm.

The climate offers exceptional inducements to engage in poultry raising. There is abundance of sunshine throughout the year; in fact, there are few days, either in winter or summer, that the birds cannot take exercise out of doors at some time during the day.

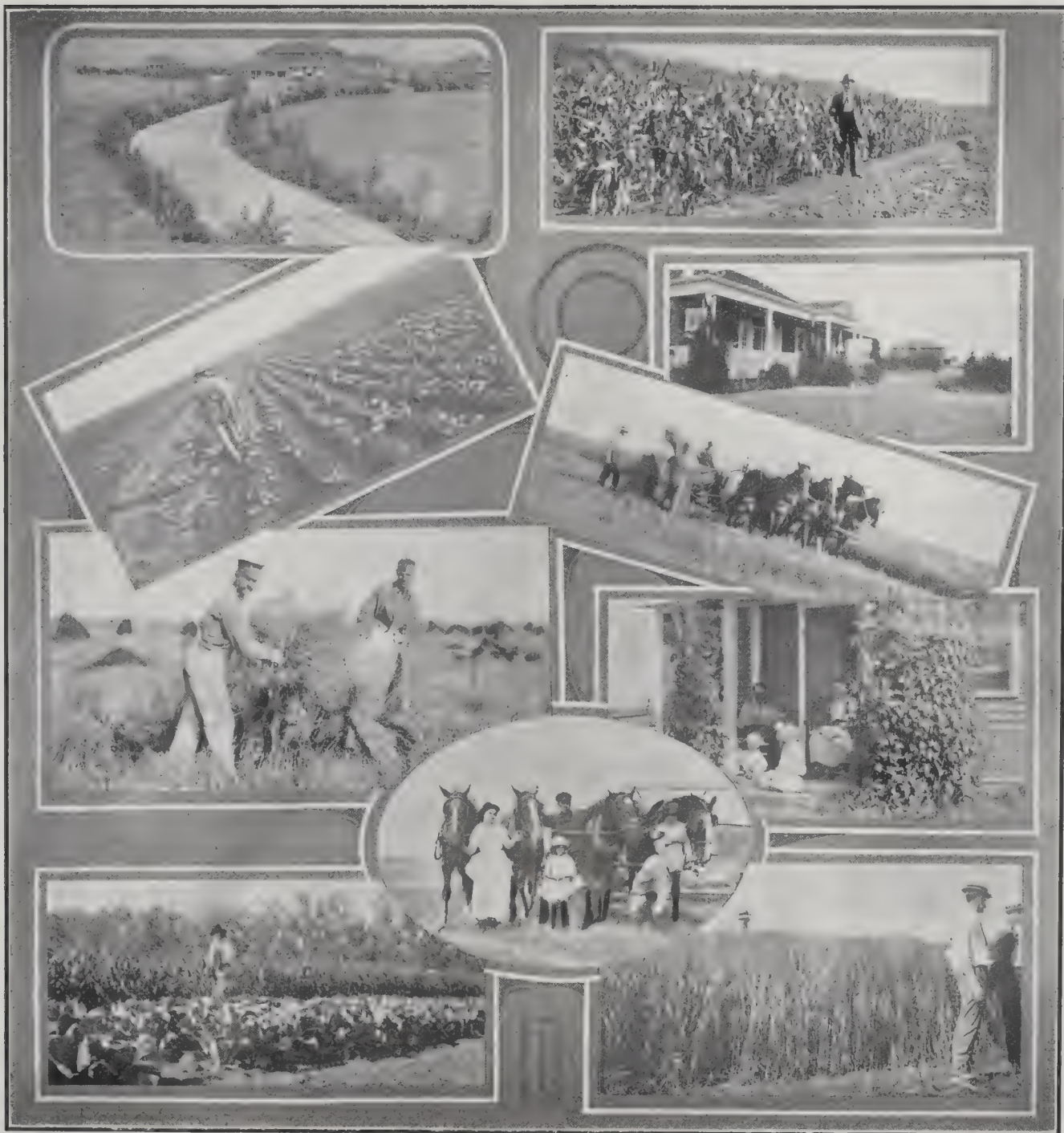
During March, April and the greater part of May there is practically no rainfall, making conditions for rearing the very best for all kinds of poultry. As this is the hatching season, the poultry man has ample opportunity to get the young stock past the danger period before the wet weather, which is so injurious to the young stock. With dry weather and from 14 to 18 hours of daylight, the young stock has every chance to mature. Many have discarded the heated brooders and are rearing chicks most successfully in the cold brooders.

Alberta is a natural turkey country, and Alberta turkeys are in high demand, not only locally, but in foreign markets as well, particularly the cities of the Pacific Coast.

It should be added that the Alberta Provincial Government gives substantial encouragement to the poultry industry, and maintains poultry experts whose services are at all times at the disposal of the farmers.

IRRIGATION IN WET YEARS

Only one doubt can remain in the mind of the earnest seeker after information who has read this far. He may



SCENES IN THE IRRIGATION COUNTRY

Prosperous homes, beautiful gardens, fertile fields, healthy, happy people; these are natural products of Southern Alberta Irrigation Districts.

grant the benefit of irrigation in medium years and dry years, but he may question the results when the occasional wet year comes. It is granted that there are occasional years which may, by comparison, be called wet, although if considered in connection with more humid countries the wettest season in Southern Alberta would be comparatively dry. Records taken at Calgary for 31 years show that there were 23 years with less than 15 inches rainfall in each year. There were seven years with more than 20 inches precipitation. One of the wettest years was 1915, and a few facts will be presented to prove that even in such a wet year irrigation may be of advantage, and certainly is no injury.

Many fields had been fall-irrigated in 1914. Some of these fields were summer-fallow, and on top of the fall irrigation came a very unusual snow-fall, which melted shortly afterwards and soaked into the unfrozen ground. Then came the wet season of 1915. If any condition could prove disastrous to irrigation, this surely was the combination. But, as a matter of fact, these irrigated fields ripened as early as non-irrigated fields, without damage from frost or other cause, and gave remarkably heavy yields. A few samples of crops grown under irrigation in 1915 may be mentioned.

W. Rowe Harvey, of Crowfoot district, had a field of barley on fall irrigated land that averaged 70 bushels per acre.

H. W. Leonard had a field of spring wheat, about half of which was fall irrigated. The field gave an average of 49 bushels per acre, and the irrigated wheat ripened as early as the other, and if anything was a trifle heavier.

C. E. Schafer, Glenrose district, had 25 acres of spring wheat on fall irrigated land which yielded 40 bushels to the acre of good wheat, and ripened early.

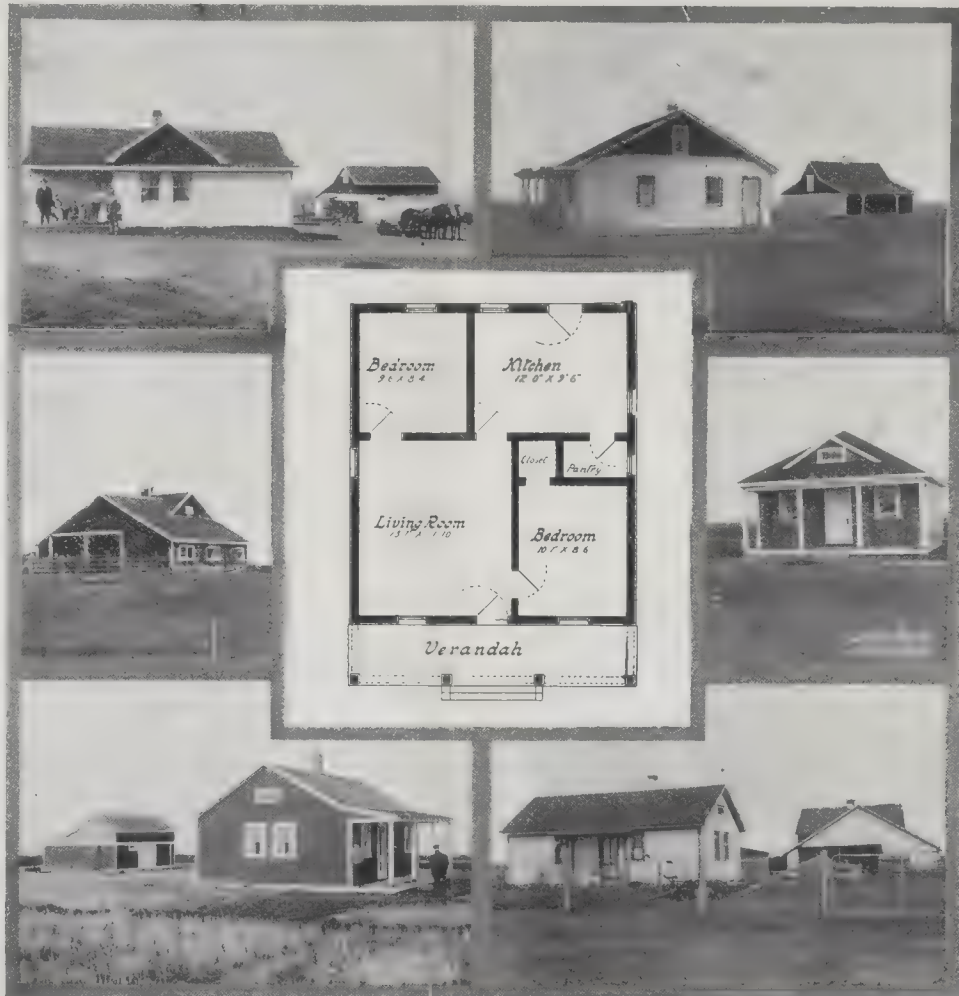
F. W. Logan, Glenrose, had a field of fall irrigated spring wheat which averaged 44 bushels to the acre. He had 68 acres of oats, about half of which was irrigated, and which yielded 75 bushels per acre. Both crops ripened in good time and good condition.

H. G. Scheer had 75 acres of spring wheat on fall irrigated land that yielded 47½ bushels per acre and ripened with the other crops.

J. B. Johannsen had 19 acres of fall wheat on fall irrigated land which yielded 52 bushels per acre. Part of his spring wheat on fall irrigated land yielded 65 bushels per acre. His irrigated wheat was heavier than his non-irrigated wheat, and ripened at practically the same time.

L. H. Lavridsen had spring wheat on fall irrigated land which yielded 55 bushels per acre, and barley, part of which was irrigated, which yielded 60 bushels per acre. He had also a field of 82 acres of fall irrigated oats that yielded 90 bushels per acre.

L. Selgensen, Craigantler district, had 50 acres of fall



TYPES OF "READY-MADE" FARMS

These Farms are prepared by the Canadian Pacific Railway Company, ready for occupation on the settler's arrival. They are sold on twenty years' terms.

irrigated oats which gave a measured yield of 131 bushels per acre. He had also fall irrigated spring wheat which yielded 50 bushels per acre. He reported that his irrigated wheat was the last planted, and the first to get ripe, and the heaviest on the field.

Instances might be multiplied, but enough have been quoted to show that, even when the occasional wet season comes, irrigation is at least no disadvantage. It is simply a case of being sure of a crop against taking chances on the weather.

WHY NOT AN IRRIGATED FARM?

We believe the question in your mind is not now, "Why an irrigated farm?" but "Why not an irrigated farm?" When it is possible to get irrigated lands so favorably situated, at the low prices and on the easy terms offered by this Company, are they not to be preferred over any other kind of farm land? Land which grows bigger crops, better crops, and grows them every year, which makes possible the raising of alfalfa, with the accompanying dairy and stock industry, and the proper rotation of crops; which offers you a home in a congenial, well-settled district, close to a large and thriving city—a country of splendid climate, good educational facilities, rapid and cheap transportation, democratic government by the people, civil and religious liberty, with the opportunity of acquiring land at small cost that will bring comfort and competence to you and your family and will not become exhausted, but, under proper management, will increase in fertility with the passing years—does not this land meet all your requirements for a home?

Do not delay or put the matter off for later consideration. It is not the policy of the Canadian Pacific Railway to urge undue haste or reckless action; we want you to make a very careful investigation of what we have to offer you before you decide, but we want you, in your own interests, to begin that investigation at once. We will be glad to answer any questions bearing on settlement in the irrigation districts, but most of all we want you to arrange to visit these districts and see their advantages with your own eyes. You owe that much to yourself and to your own hope of future prosperity. Make a trip of inspection; investigate the country for yourself fully and thoroughly, and then decide in accordance with your own good judgment.

"READY-MADE" FARMS

Although these irrigation districts offer a wonderful opportunity to the farmer wanting to make a start on land of his own, the Canadian Pacific Railway Company knows that many good farmers require some financial assistance in order to make the best kind of start. It was to assist such farmers and their families that the policy of providing ready-made farms was established.

A ready-made farm is a farm made ready for occupation by the home-maker and his family. These farms, which are sold to married men only, consist of 160 or 320 acres each, and are located on specially selected lands, convenient to schools, churches, local improvements, and telephones. On each farm a comfortable house and a good barn have been built; the land is all fenced; a well drilled and a pump installed, and an area of from fifty to one hundred acres is under cultivation. A settler located on such a farm should begin to get results much more quickly than if he had to do all his own development; indeed, the settler who is properly supplied with milch cows, hogs and poultry, could make his farm revenue-producing from the day he arrives on it.

LOANS TO HOME-MAKERS

For those who do not wish to avail themselves of a ready-made farm, and yet who desire some financial assist-

ance toward making a start, the Company has another policy equally liberal and remarkable—its Loans to Home-makers Scheme. Under this policy a loan to the value of not more than \$2,000 will be made to the home-maker in the form of improvements upon the land he buys.

When the Company finds a practical farmer, a married man who has a thorough knowledge of farm work, who has the necessary horses and implements to work a farm, or the money to buy them, and who has sufficient capital to make his first payment and provide for himself and family for the first year, it is prepared to assist such a man with a loan for the purpose of providing a house and barn, digging a well, and fencing the land. The settler may select the type of house and barn he desires from plans which are furnished by the Company, which plans are the result of many years' knowledge of conditions in this country and the requirements of the settler.

This loan is extended over a period of twenty years, with interest at six per cent. per annum. No security is required other than the land itself and the first payment on the land and loan, which is made at the time of purchase.

PRICES

The price of good irrigated land ranges downward from \$50.00 per acre. In arriving at the price of a farm allowance is made for any land which cannot be irrigated, which is sold at a much lower price. Farms containing some irrigated and some non-irrigated land can be had, and this makes an excellent combination.

GENERAL TERMS OF SALE

In order to encourage the settlement of experienced farmers on its lands in Western Canada, the Canadian Pacific Railway Company makes very liberal terms to home-makers. The general period for the payment of land extends over twenty years, with interest at six per cent. on the amount unpaid.

The first payment amounts to one-tenth of the price of the land and improvements or loan (if any), and if the purchaser then proceeds to carry out the settlement conditions which require him to occupy and improve the property, he is allowed a reduced rate of interest, with no payment on principal, during the next two years. At the end of the third year he makes a payment of 6 per cent. interest on the amount outstanding, and at the end of the fourth year his regular payments of principal and interest begin. Payments are then divided over another 15 years, with interest at 6 per cent. The whole policy is planned to assist the man with small capital, giving him a chance to make a start which would otherwise be impossible for him.

It is not necessary for the purchaser to take the full time allowed by his contract; he may prepay his indebtedness if he desires.

LOAN OF LIVESTOCK

It is the policy of the Company to encourage the raising of livestock, as well as grain crops. It believes that, while farmers may make big profits out of grain, their permanent prosperity depends on mixed farming. Particularly in irrigation districts must livestock be an important factor on the farm. For this reason the Company, under certain conditions, assists buyers of its lands in the irrigation districts by advancing livestock to the value of \$1,000 on a cash payment of 20 per cent., credit being given for the balance. This loan is not made until a settler has been at least one year in occupation of his land, and he must then be approved by the Company's Superintendent of Agriculture and Animal Industry.

TITLE

When you purchase land from the Canadian Pacific Railway, you deal with a permanent corporation which has assets of hundreds of millions of dollars. Your contract is made direct with the Company, and the deed to the land is made by them under authority of the "Land Titles Act, 1894." The title to the land is issued to you direct by the Crown, under what is known as the Torrens system (everywhere recognized as being the simplest and most efficient in the world), whereby the validity and absolute previous clearness of the title is guaranteed by the Government and cannot afterward be questioned. This is a matter of the greatest importance to intending settlers. You want to be absolutely sure that when your payments have been completed you will receive a clear title.

WATER TITLE, SUPPLY AND RENTAL

One of the most important things for an irrigation farmer to consider is the certainty of his supply of water, and the laws under which irrigation is practised. In Canada, as has already been explained, the oversight of all irrigation enterprise is in the hands of a special Irrigation Department, acting under the Department of the Interior. The right to use any inland body of water is controlled exclusively by the Dominion Government, and such water may be used for irrigation only with the authority of the Government. The title to a water right, therefore, is of the same value as the

title to the land, and under the Canadian system, there is no possibility of a farmer finding he has bought irrigable land without being able to secure sufficient water to irrigate it.

Irrigable land is sold from lists showing the area of irrigable land in each quarter-section. Water is sold on the basis of the Legal Duty of Water now prevailing, which is one cubic foot per second for every 150 acres, flowing continuously during the irrigation season (1st May to 1st October).

Purchasers of irrigable lands will have free use of water for one year from date of contract. Water rental will commence and first payment becomes due one year from date of contract. The rental ranges from 50c to \$1.25 per acre per year for the irrigable land.

WRITE FOR FULL INFORMATION

It is impossible in a folder of this size to cover every phase of the subject, and questions may occur to you which are not dealt with fully herein. If so, or if you want information on any point touching the Company's lands or terms, do not hesitate to write, stating just what information you desire. Our booklet, "Alberta, Saskatchewan, and Manitoba," gives much information which cannot be included in this folder, and will be sent free on request. Write to Publicity Branch, Department of Colonization and Development, C.P.R., Calgary, Canada, or to your nearest representative, a list of whom will be found on the last cover page of this booklet.

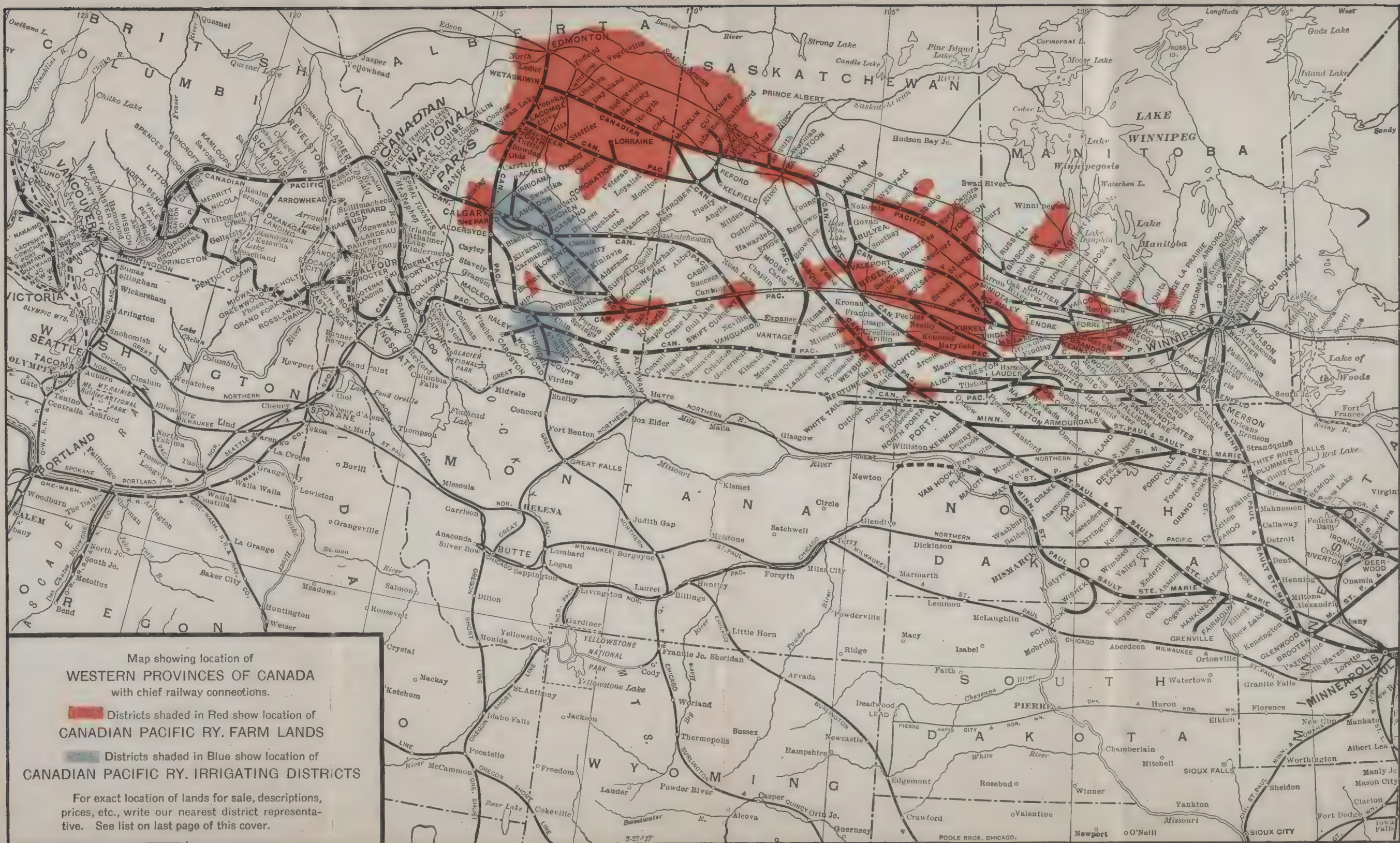


CANADIAN PACIFIC RAILWAY SUPPLY AND DEMONSTRATION FARM AT STRATHMORE, ALBERTA, IN THE WESTERN SECTION OF THE CANADIAN PACIFIC RAILWAY IRRIGATION BLOCK.



OPERATION AND MAINTENANCE OFFICES OF THE CANADIAN PACIFIC RAILWAY COMPANY'S
IRRIGATION SYSTEMS:

Left Upper--Operation and Maintenance Headquarters, Eastern Section, Irrigation Block, Brooks, Alberta.
 Right Upper--Operation and Maintenance Headquarters, Western Section, Irrigation Block, Strathmore, Alberta.
 Centre--Operation and Maintenance Headquarters, Lethbridge Irrigation System, Lethbridge, Alberta. Headquarters Building on the left.
 Lower--Head Office, Department of Natural Resources, Calgary, Alberta.



Map showing location of
WESTERN PROVINCES OF CANADA
with chief railway connections.

Districts shaded in Red show location of
CANADIAN PACIFIC RY. FARM LANDS

Districts shaded in Blue show location of
CANADIAN PACIFIC RY. IRRIGATING DISTRICTS

For exact location of lands for sale, descriptions,
prices, etc., write our nearest district representa-
tive. See list on last page of this cover.



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IRRIGATION SYSTEMS:

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Information for Settlers

Timely Pointers on Customs, Quarantine and Transportation Regulations Affecting Settlers and Settlers' Effects Entering Canada

Any journey may be made pleasant or otherwise, according to the arrangements made and the knowledge of the traveler concerning the conditions to be faced. A study of the following paragraphs will well repay the settler who intends to move himself, his family, and their effects to Western Canada. The information given is the latest and most accurate available at the time of printing this booklet, but as regulations and tariffs change from time to time, the settler should consult the nearest representative of the Department of Colonization and Development of the Canadian Pacific Railway. See list on last page of this cover.

Canadian Customs—It is the policy of the Canadian Government to encourage desirable settlement, and consequently all laws and regulations are made as easy as possible for the intending settler. Settlers' effects, including wearing apparel, books, usual and reasonable household furniture and other household effects, instruments and tools of trade, occupation or employment, guns, musical instruments, domestic sewing machines, typewriters, bicycles, carts, wagons and other highway vehicles, agricultural implements and live stock for the farm, not to include live stock or articles for sale or for use as a contractor's outfit, nor vehicles nor implements moved by mechanical power, nor machinery for use in any manufacturing establishment; all the foregoing if actually owned by the settler for at least six months before his removal to Canada, and subject to regulations prescribed by the Minister of Customs, provided that any dutiable articles as settlers' effects may not be entered unless brought by the settler on his first arrival, and shall not be sold or otherwise disposed of, without payment of duty until after twelve months' actual use in Canada.

A settler is allowed sixteen head of horses or cows, which may be brought into Canada as settlers' effects.

Automobiles, traction engines, gasoline engines, and all implements or vehicles moved by mechanical power, are dutiable.

Numerous Ports of Entry and sub-ports are located in Manitoba, Saskatchewan, Alberta and British Columbia, to which goods may be forwarded in bond. When you have decided upon your route of travel ascertain from your district representative the most convenient port at which you may enter your effects.

Rates of duty on general merchandise, or on property not entitled to free entry as settlers' effects, can be learned at any Port of Entry, or direct from the Department of Customs, Ottawa, Canada.

Shipment of Live Stock—The intending settler should be guided by the following information concerning Canadian Quarantine Regulations:

All animals imported into the Dominion of Canada from the United States must be accompanied by a statutory declaration, or affidavit, made by the owner or importer, stating clearly the purpose for which said animals are imported, viz.: whether for breeding purposes, for milk production, for work, for grazing, feeding or slaughter, or whether they form part of settler's effects, or whether they are entered for temporary stay.

Said declaration or affidavit must be presented to the Collector of Customs at the Port of Entry, who will decide whether the animals are entitled to entry under these regulations, and who will notify the Veterinary Inspector of the Department of Agriculture in all cases where the regulations require an inspection to be made.

The importation of branded or range horses, mules and asses, other than those which are gentle and broken to harness or saddle, is prohibited.

Settlers' horses, mules and asses must be accompanied by a satisfactory certificate of Mallein test, dated not more than thirty days

prior to the date of entry, and signed by an inspector of the United States Bureau of Animal Industry, or a similar certificate from a reputable veterinary, provided such certificate is endorsed by an inspector of said Bureau of Animal Industry.

The owner or the agent of the horses or stock should personally carry this certificate and not submit the same to the railway companies. Having this certificate for the Canadian Veterinary Inspector, you will not be detained at the frontier port.

When horses are not accompanied by a certificate, they will be tested at the quarantine station at the Port of Entry into Canada, or under such restrictions as the Veterinary Director-General may prescribe, at point of destination.

When tested at the Port of Entry, if any reactors are found they shall be slaughtered without compensation, or definitely marked and returned to the United States, and must not again be presented for entry. All horses, mules or asses in the same consignment shall be returned to the United States, but the non-reactors may be again presented for entry and further test after the lapse of a period of not less than fifteen days from the date of the first test, provided that satisfactory evidence is produced to the effect that they have not, during the same period, been in contact with affected animals. When tested at destination points, all animals reacting to the test will be slaughtered without compensation, while those comprising the rest of the shipment will be detained in quarantine until it is shown to the satisfaction of the Veterinary Director-General that they are free from disease.

No compensation will, under any circumstances, be paid for horses reacting to Mallein within six months after the date of their importation into Canada.

Settlers' cattle, at the present time, are allowed to enter Canada without being subjected to the tuberculin test.

Cattle for breeding purposes and milk production, six months old or over, if unaccompanied by a satisfactory tuberculin-test chart, dated not more than thirty days prior to the date of entry and signed by a veterinarian of the United States Bureau of Animal Industry, must be detained in quarantine for one week, or such further period as may be deemed necessary, and subjected to the tuberculin test; cattle reacting thereto must be returned to the United States, or slaughtered without compensation.

Importers may be required to furnish a statutory declaration that the chart produced applies to the cattle it purports to describe, and no other.

Settlers' sheep must be accompanied by a certificate from an Inspector of the Bureau of Animal Industry. If not accompanied by a certificate, they will be held at the quarantine station at the frontier port for thirty days.

All swine are held at the quarantine station at the frontier port for thirty days, and before being admitted to quarantine a certificate from the Inspector of the Bureau of Animal Industry must be presented.

The importer will also be required to produce an affidavit to the effect that the swine he proposes to import have not been immunized to hog cholera by the simultaneous injection of hog cholera virus and serum.

Chickens may be brought into Canada by a settler free of duty if he has actually owned such chickens for at least six months before his removal into Canada, and has brought them into Canada within one year after his first arrival.

Regulations regarding free entry of pure-bred stock.—No animal imported into Canada for the improvement of stock shall be admitted free of duty unless the owner is a British subject, resident in the

Information for Settlers—Continued

British Empire, or, if more than one owner, each is a British subject resident in the British Empire, and there is furnished an import certificate, stating that the animal is recorded in a Canadian national record or in a foreign record recognized as reliable by the National Record Committee. In case such certificate is not at hand at the time of the arrival of the animals, entry for duty may be made with the Canadian customs, subject to a refund of the duty upon the production of the requisite certificate and proofs in due form satisfactory to the customs within one year from the time of entry. For further information regarding this registration of pure-bred stock, address Department of Agriculture, National Live Stock Records, Ottawa, Canada.

Shipment of Settlers' Effects.—The following freight regulations for the carriage of settlers' effects on the Canadian Pacific Railway should be carefully studied. Carload shipments of settlers' effects (second hand) within the meaning of the tariff, must consist of the following described property of an actual farm settler:

Household goods and personal effects (all second hand), and may include:

Agricultural implements and farm vehicles, all second hand (will not include automobiles).

Live stock, not exceeding a total of ten head, consisting of horses, mules, cows, heifers, calves, oxen; sheep or hogs.

Lumber and shingles (pine, hemlock, spruce or basswood, which must not exceed 2,500 feet in all, or the equivalent thereof; or, in lieu of (not in addition to) the lumber and shingles, a portable house, knocked down, may be shipped.

Seed grain, trees or shrubbery.—The quantity of seed grain must not exceed the following weight: Wheat, 4,500 lbs.; oats, 3,400 lbs.; barley, 4,800 lbs.; flaxseed, 1,400 lbs.

Live poultry (small lots only).

Feed sufficient for feeding the live stock while on the journey.

One man will be passed free in charge of full carloads of settlers' effects containing live stock, to feed, water and care for them in transit. No reduced return transportation will be given.

Settlers' Effects, to be entitled to carload rates, must consist of a carload from the point of shipment to one point of destination. Carload shipments will not be stopped in transit for partial unloading.

The Minimum Carload Weight of 24,000 lbs. is applicable only to cars not exceeding thirty-six feet six inches in length, inside measurement; larger cars must not be used for this traffic. If the actual weight of the carload exceeds 24,000 lbs., the additional weight will be charged for at the carload rate.

Freight Rates.—Information regarding special rates on settlers' effects can be obtained from any Canadian Pacific Railway agent in the United States or Canada. As an indication of how they run, the following is a list of rates from points in the States and Eastern Canada to Calgary, Alberta and Regina, Saskatchewan:

| | | |
|---------------------------------------|----------|----------------------------|
| Montreal to Calgary..... | \$135.60 | for carload of 24,000 lbs. |
| Newport, Vt., to Calgary..... | 242.00 | " " " 20,000 " |
| Prescott to Calgary..... | 135.60 | " " " 24,000 " |
| Buffalo, N. Y., to Calgary..... | 230.00 | " " " 20,000 " |
| Buffalo, N. Y., to Regina..... | 172.00 | " " " 20,000 " |
| Windsor to Regina..... | 105.60 | " " " 24,000 " |
| Windsor to Saskatoon..... | 108.00 | " " " 24,000 " |
| Windsor to Calgary..... | 135.60 | " " " 24,000 " |
| Chicago, Ill., to Minn. Transfer... | 40.00 | " " " 20,000 " |
| Kansas City, Mo., to Minn. Transfer | 56.00 | " " " 20,000 " |
| Omaha, Neb., to Minn. Transfer... | 54.00 | " " " 20,000 " |
| Denver, Colo., to Minn. Transfer... | 112.00 | " " " 20,000 " |
| Minn. Tsfr. and St. Paul to Regina... | 40.00 | " " " 24,000 " |
| Minn. Tsfr. and St. Paul to Calgary. | 45.00 | " " " 24,000 " |

| | | |
|-------------------------------------|--------|----------------------------|
| Helena, Mont., to Coultts..... | 64.00 | for carload of 20,000 lbs. |
| Idaho Falls, Idaho, to Coultts..... | 124.00 | " " " 20,000 " |
| Great Falls, Mont., to Coultts..... | 52.00 | " " " 20,000 " |
| Coultts and Regina..... | 29.40 | " " " 24,000 " |
| Coultts to Calgary..... | 16.80 | " " " 24,000 " |
| Portland, Ore., to Kingsgate..... | 142.00 | " " " 20,000 " |
| Spokane, Wash., to Kingsgate..... | 62.00 | " " " 20,000 " |
| Kingsgate to Calgary..... | 37.60 | " " " 24,000 " |
| Kingsgate to Regina..... | 62.40 | " " " 24,000 " |
| Portland, Ore., to Huntingdon..... | 76.00 | " " " 20,000 " |
| Huntingdon to Calgary..... | 59.20 | " " " 24,000 " |
| Huntingdon to Regina..... | 84.80 | " " " 24,000 " |

Settlers Rates.—The following list of special homeseekers' round-trip rates will give a general indication of the cost of such trips to Western Canada:

| | Winnipeg, Man. | Regina, Sask. | Saskatoon, Sask. | Calgary, Alta. |
|---------------------------|-------------------|------------------|---------------------|-------------------|
| Chicago, Ill. | \$29.10 | \$35.00 | \$37.50 | \$46.50 |
| Peoria, Ill. | 33.60 | 37.50 | 40.00 | 47.50 |
| St. Louis, Mo. | 34.40 | 44.00 | 46.50 | 50.50 |
| Kansas City, Mo. | 30.15 | 43.50 | 46.00 | 47.50 |
| Council Bluffs, Iowa..... | 24.40 | 33.75 | 40.00 | 46.50 |
| Omaha, Neb. | 24.75 | 37.50 | 40.00 | 46.50 |
| Sioux City, Iowa..... | 21.45 | 30.85 | 38.05 | 46.50 |
| St. Paul, Minn..... | 17.00 | 28.60 | 32.50 | 39.50 |
| Minneapolis, Minn. | 17.00 | 28.60 | 32.50 | 39.50 |

One-way settlers' fares in force between the following points at the following approximate rates, but it is always advisable to verify them from your nearest Station Agent, as they are subject to change from time to time without notice.

| | Winnipeg, Man. | Regina, Sask. | Saskatoon, Sask. | Calgary, Alta. |
|--------------------------|-------------------|------------------|---------------------|-------------------|
| Montreal, P. Q. | \$17.00 | \$17.75 | \$19.50 | \$24.50 |
| New York, via Montreal.. | 27.30 | 28.05 | 29.80 | 34.80 |
| Boston, via Montreal.... | 26.45 | 27.30 | 28.95 | 33.95 |
| Buffalo | 20.10 | 20.85 | 22.60 | 27.60 |
| Windsor (Detroit) | 17.00 | 17.75 | 19.50 | 24.50 |

As rates and conditions may change without notice, settlers should in every case consult their District Representative on all points pertaining to their removal to Western Canada. By so doing the lowest rates can always be secured, and expensive mistakes can be avoided.

For further information concerning Canadian Pacific Railway lands or opportunities in Western Canada write your nearest District Representative or agent as shown below.

F. W. RUSSELL, Department of Natural Resources, C. P. R.,
Winnipeg, Man.
W. J. GEROW, Department of Natural Resources, C. P. R.,
Saskatoon, Sask.
C. LA DUE NORWOOD, Department of Natural Resources, C. P. R.,
Edmonton, Alberta
G. W. MUDDIMAN, Department of Natural Resources, C. P. R.,
Montreal, Que.
A. E. MOORE, Manager, Land Branch, C. P. R.,
62-65 Charing Cross, London, S. W., England
L. F. MOWREY, District Representative,
1270 Broadway, New York City, N. Y.
J. N. K. MACALISTER, District Representative,
176 E. Third Street, St. Paul, Minn.
W. A. SMITH, District Representative, 412-414 Ideal Building,
Seventeenth and Champa Streets, Denver, Colo.
R. C. BOSWORTH, District Representative,
705 Sprague Avenue, Spokane, Wash.
L. P. THORNTON, Traveling Representative,
208 Railway Exchange Bldg., Third and Stark Sts., Portland, Ore.
C. A. VAN SCOY, Special Irrigation Agent,
645 Market Street, San Francisco, Cal.
or
ALLAN CAMERON, General Superintendent of Lands,
Canadian Pacific Railway, Calgary, Alberta



CAN. PAC. RAILWAY
DEPT. OF NATURAL RESOURCES
W. J. GEROW, Land Agent
SASKATOON, SASK.

